

Zad 1

Wydajemy poniższe polecenia;

- apt update

- apt install samba

```
root@debian:~# mkdir /home/dokumenty
root@debian:~# _
```

Przechodzimy do nowoutworzonego dokumentu i nanosimy modyfikacje

```
/etc/samba/smb.conf [----] 0 L:[160+16 176/244] *(6407/8700b) 0091 0x05B
# Maximum number of usershare, 0 means that usershare is disabled.
#   usershare max shares = 100

# Allow users who've been granted usershare privileges to create
# public shares, not just authenticated ones
#   usershare allow guests = yes

#===== Share Definitions =====
[Dokumenty]
    path= /home/dokumenty
    read only= no
    guest ok= yes
    browseable= yes

[homes]
    comment = Home Directories
    browseable = no

# By default, the home directories are exported read-only. Change the
# next parameter to 'no' if you want to be able to write to them.
#   read only = yes

# File creation mask is set to 0700 for security reasons. If you want to
# create files with group=rw permissions, set next parameter to 0775.
#   create mask = 0700

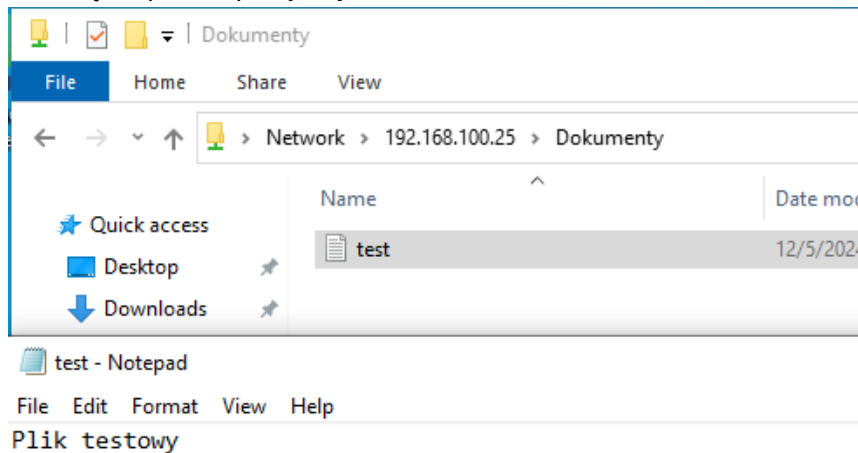
# Directory creation mask is set to 0700 for security reasons. If you want to
# create dirs. with group=rw permissions, set next parameter to 0775.
#   directory mask = 0700

# By default, \\server\username shares can be connected to by anyone
# with access to the samba server.
# The following parameter makes sure that only "username" can connect
1Pomoc 2Zapisz 3Zaznacz 4Zastap 5Kopiuuj 6Przen 7Szukaj 8Usu
```

Po zapisaniu zmian wydajemy polecenia:

```
root@debian:~# service smbd restart
root@debian:~# systemctl restart smbd
root@debian:~# chmod 777 /home/dokumenty
root@debian:~#
/home/dokumenty/test.txt [-M--]
Plik testowy_
```

Sprawdzamy połączenie na systemie Windows. Odpalamy Eksplorator plików, w miejscu na ścieżkę do pliku wpisujemy : `\\adres IPv4\folder`



Zad 2

Tworzymy nowych użytkowników i dodajemy ich do systemu Samaba:

```
root@debian:~# useradd jgula
root@debian:~# passwd jgula
Nowe hasło:
Proszę ponownie wpisać nowe hasło:
passwd: hasło zostało zmienione
root@debian:~# smbpasswd -a jgula
New SMB password:
Retype new SMB password:
Added user jgula.
root@debian:~# _

root@debian:~# useradd anowak
root@debian:~# passwd anowak
Nowe hasło:
Proszę ponownie wpisać nowe hasło:
passwd: hasło zostało zmienione
root@debian:~# smbpasswd -a anowak
New SMB password:
Retype new SMB password:
Added user anowak.
root@debian:~# _

root@debian:~# useradd aromanowska
root@debian:~# passwd aromanowska
Nowe hasło:
Proszę ponownie wpisać nowe hasło:
passwd: hasło zostało zmienione
root@debian:~# smbpasswd -a aromanowska
New SMB password:
Retype new SMB password:
Added user aromanowska.
root@debian:~# _

root@debian:~# mkdir /home/Kadry
root@debian:~# groupadd -g 1337 Kadry
root@debian:~# usermod -G Kadry jgula
root@debian:~# usermod -G Kadry anowak
root@debian:~# usermod -G Kadry aromanowska
root@debian:~# _
```

Sprawdzamy plik `/etc/group`:

```
sambashare:x:996:
jgula:x:1001:
anowak:x:1002:
aromanowska:x:1003:
Kadry:x:1337:jgula,anowak,aromanowska
```

Modyfikujemy plik konfiguracyjny:

```
etc/samba/smb.conf [-M--] 30 L:[164+20 184/255] *(6644/8940b) 0010 0x00A
public shares, not just authenticated ones
usershare allow guests = yes

===== Share Definitions =====

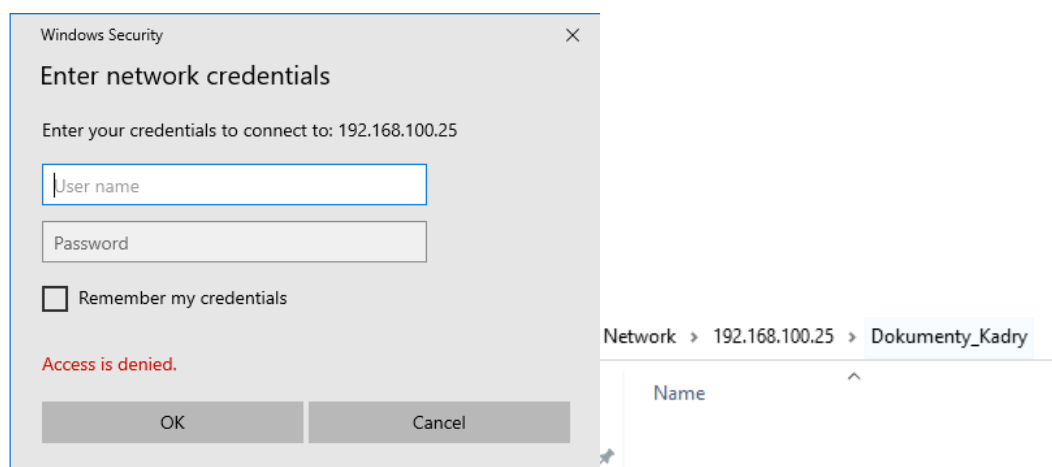
[Dokumenty]
path= /home/dokumenty
read only= no
guest ok= yes
browseable= yes

[Dokumenty_Kadry]
path= /home/Kadry
browseable= yes
read only= yes
valid users =@Kadry
write list= jgula, anowak
create mask= 0770
force create mode= 0770
directory mask= 0770
force directory mode =0770

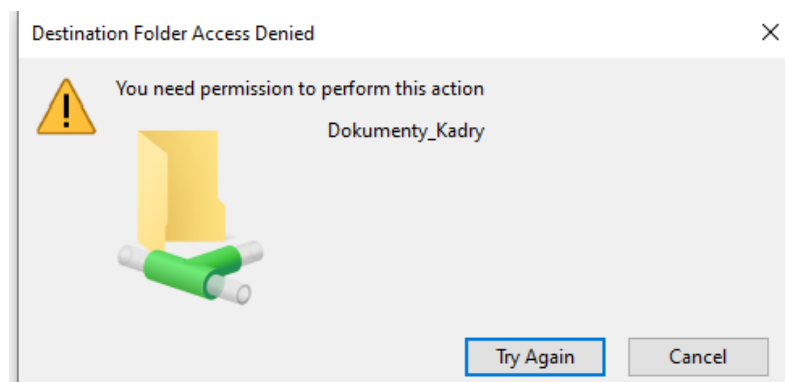
[homes]
comment = Home Directories
browseable = no

By default, the home directories are exported read-only. Change the
```

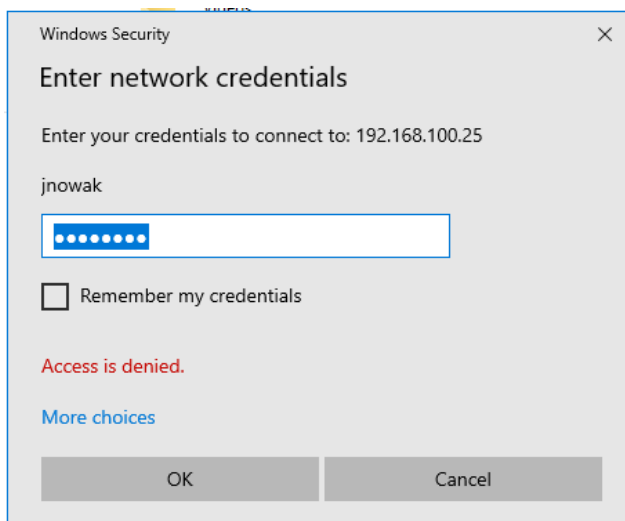
Przy próbie połączenia się z zasobem:



Próba utworzenia pliku tekstowego, jako zalogowany użytkownik aromanowska:



Próba zalogowania na użytkownika niebędącego członkiem Kadr:



Tworzymy plik jako członek grupy Kadry i sprawdzamy uprawnienia:

```
root@debian:~# ls -la /home/Kadry
razem 8
drwxrwx-- 2 root  Kadry  4096 12-06 09:55 .
drwxr-xr-x 5 root  root   4096 12-05 21:41 ..
-rwxrwx-- 1 anowak anowak    0 12-06 09:55 test.txt
root@debian:~#

$ touch /home/Kadry/test.txt
$
```

Zad 3

```
/etc/samba/smb.conf [-M--] 17 L:[160+33 193/259] *(67
# Maximum number of usershare. 0 means that usershare i
# usershare max shares = 100

# Allow users who've been granted usershare privileges
# public shares, not just authenticated ones
usershare allow guests = yes

#===== Share Definitions =====

[Dokumenty]
    path= /home/dokumenty
    read only= no
    guest ok= yes
    browseable= yes

[Dokumenty_Kadry]
    path= /home/Kadry
    browseable= yes
    read only= yes
    valid users =@Kadry
    write list= jgula, anowak
    create mask= 0770
    force create mode= 0770
    directory mask= 0770
    force directory mode =0770

[homes]
    comment = Home Directories
    browseable = no

[Home]
    path=/home
    read only= no

root@debian:~# systemctl restart smbd
root@debian:~# service smbd restart
root@debian:~# smbpasswd -a root
New SMB password:
Retype new SMB password:
Added user root.
root@debian:~#
```

Na drugiej maszynie:

- apt update
- apt install cifs-utils

- apt install smbclient

Wydajemy polecenie w celu sprawdzenia aktywnych zasobów:

```
root@debian2:~# smbclient -L 192.168.100.25
Password for [WORKGROUP\root]:

  Sharename      Type            Comment
  -----
  Dokumenty      Disk
  Dokumenty_Kadry Disk
  Home           Disk
  print$         Disk           Printer Drivers
  IPC$           IPC            IPC Service (Samba 4.17.12-Debian)
  root           Disk           Home Directories
SMB1 disabled -- no workgroup available
root@debian2:~# _

root@debian2:~# mount -t cifs //192.168.100.25/Home /home/test
Password for root@//192.168.100.25/Home:
root@debian2:~# ls -la /test
ls: nie ma dostępu do '/test': Nie ma takiego pliku ani katalogu
root@debian2:~# ls -la /home/test
razem 4
drwxr-xr-x 2 root root  0 12-05 21:41 .
drwxr-xr-x 4 root root 4096 12-06 09:28 ..
drwxr-xr-x 2 root root  0 12-05 16:55 dokumenty
drwxr-xr-x 2 root root  0 12-06 09:55 Kadry
drwxr-xr-x 2 root root  0 2023-06-12 user
root@debian2:~# _
```

Test ręczny

Modyfikujemy plik (na maszynie, która ma mieć zdalny dostęp do zasobów):

```
/etc/fstab      [-M--] 97 L:[ 1+15 16/ 16] *(876 / 876b) <EOF> [x] [x]
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# systemd generates mount units based on this file, see systemd.mount(5).
# Please run 'systemctl daemon-reload' after making changes here.
#
# <file system> <mount point> <type> <options> <dump> <pass>
# / was on /dev/sda1 during installation
UUID=79927f18-cebc-40d9-bfde-8f60e0014712 / ext4 errors=remount-ro 0 1
# swap was on /dev/sda5 during installation
UUID=f7d11954-3108-4543-852a-09aabd7984f1 none swap sw 0 0
/dev/sr0 /media/cdrom0 udf,iso9660 user,noauto 0 0
//192.168.100.25/Home /home /cifs username=root,password=Zaq12wsx 0 0
```

Sprawdzamy działanie:

```
root@debian2:~# ls -la /home/
razem 12
drwxr-xr-x 4 root root 4096 12-06 09:28 .
drwxr-xr-x 18 root root 4096 2023-06-12 ..
drwxr-xr-x 2 root root  0 12-05 21:41 test
drwx----- 2 user user 4096 2023-06-12 user
root@debian2:~#
```

Wydajemy polecenie:

```
root@debian2:~# mount
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,relatime,size=469356k,nr_inodes=117339,mode=755,inode64)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,nodev,noexec,relatime,size=98420k,mode=755,inode64)
/dev/sda1 on / type ext4 (rw,relatime,errors=remount-ro)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev,inode64)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k,inode64)
cgroup2 on /sys/fs/cgroup type cgroup2 (rw,nosuid,nodev,noexec,relatime,nsdelegate,memory_recursivecap,rot)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
bpf on /sys/fs/bpf type bpf (rw,nosuid,nodev,noexec,relatime,mode=700)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=30,pgrp=1,timeout=0,minproto=5,maxproto=5,direct,pipe_ino=12761)
hugetlbfs on /dev/hugepages type hugetlbfs (rw,relatime,pagesize=2M)
debugfs on /sys/kernel/debug type debugfs (rw,nosuid,nodev,noexec,relatime)
tracefs on /sys/kernel/tracing type tracefs (rw,nosuid,nodev,noexec,relatime)
mqueue on /dev/mqueue type mqueue (rw,nosuid,nodev,noexec,relatime)
configfs on /sys/kernel/config type configfs (rw,nosuid,nodev,noexec,relatime)
fusectl on /sys/fs/fuse/connections type fusectl (rw,nosuid,nodev,noexec,relatime)
ramfs on /run/credentials/systemd-sysctl.service type ramfs (ro,nosuid,nodev,noexec,relatime,mode=700)
ramfs on /run/credentials/systemd-sysusers.service type ramfs (ro,nosuid,nodev,noexec,relatime,mode=700)
ramfs on /run/credentials/systemd-tmpfiles-setup-dev.service type ramfs (ro,nosuid,nodev,noexec,relatime,mode=700)
ramfs on /run/credentials/systemd-tmpfiles-setup.service type ramfs (ro,nosuid,nodev,noexec,relatime,mode=700)
binfmt_misc on /proc/sys/fs/binfmt_misc type binfmt_misc (rw,nosuid,nodev,noexec,relatime)
tmpfs on /run/user/0 type tmpfs (rw,nosuid,nodev,relatime,size=98416k,nr_inodes=24604,mode=700,inode64)
//192.168.100.25/Home on /home/test type cifs (rw,relatime,vers=3.1.1,cache=strict,username=root,uid=0,noforceuid,gid=0,noforcegid,addr=192.168.100.25,file_mode=0755,dir_mode=0755,soft,nounix,serverino,mapposix,rsize=4194304,wsz=4194304,bsize=1048576,echo_interval=60,actimeo=1,closetimeo=1)
root@debian2:~#
```

Sprawdzamy działanie:

```
root@debian2:~# echo "plik testowy" > /home/plikDrugaMaszyna.txt
root@debian2:~#
```

```
root@debian:~# cat /home/plikDrugaMaszyna.txt
plik testowy
root@debian:~#
```

Zad 4

Na serwerze plików:

Apt install nfs-kernel-server, modyfikujemy plik:

```
/etc/exports      [----] 58 L: [ 1+10 11/ 11] *(440 / 441b) 0041 0x029
# /etc/exports: the access control list for filesystems which may be exported
#<-----><----->to NFS clients.  See exports(5).
#
# Example for NFSv2 and NFSv3:
# /srv/homes      hostname1(rw,sync,no_subtree_check) hostname2(ro,sync,no_subtree_check)
#
# Example for NFSv4:
# /srv/nfs4       gss/krb5i(rw,sync,fsid=0,crossmnt,no_subtree_check)
# /srv/nfs4/homes gss/krb5i(rw,sync,no_subtree_check)
#
/home_2<----->192.168.100.35/24(rw,sync,no_subtree_check)
```

Wydajemy polecenia:

- systemctl restart nfs-kernel-server

```
root@debian:~# exportfs -v
/home_2      192.168.100.35/24(sync,wdelay,hide,no_subtree_check,sec=sys,rw,secure,root_squash,no_all_squash)
root@debian:~# _
```

W celu sprawdzenia

```
root@debian:~# mkdir /home_2
root@debian:~# exportfs -a
root@debian:~# _
```

-chown nobody:nogroup /home_2

Na 2 maszynie wydajemy polecenie:

-apt install nfs-common i modyfikujemy plik:

```
/etc/fstab [----] 17 L:[ 1+16 17/ 17] *(894 / 952b) 0111 0x06F [x] [
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# systemd generates mount units based on this file, see systemd.mount(5).
# Please run 'systemctl daemon-reload' after making changes here.
#
# <file system> <mount point> <type> <options> <dump> <pass>
# / was on /dev/sda1 during installation
UUID=79927f18-cebc-40d9-bfde-8f60e0014712 / ext4 errors=remount-ro 0 1
# swap was on /dev/sda5 during installation
UUID=f7d11954-3108-4543-852a-09aabd7984f1 none swap sw 0 0
/dev/sr0 /media/cdrom0 udf,iso9660 user,noauto 0 0
//192.168.100.25/Home<->/home<-><----->cifs<-->username=root,password=Zaq12wsx<----->0<----->0
192.168.100.25:/home_2<->/home_2<----->nfs<-->auto,nofail,noatime,nolock,intr,tcp<-->0<----->0
```

Wydajemy polecenia i sprawdzamy działanie:

```
root@debian2:~# showmount -e 192.168.100.25
Export list for 192.168.100.25:
/home_2 192.168.100.35/24
root@debian2:~# mount -a
root@debian2:~# _
```

```
root@debian2:~# echo "nowy plik" > /home_2/plik.txt
root@debian2:~# _
```

```
root@debian2:~# ls -la /home_2
razem 12
drwxrwxrwx 2 nobody nogroup 4096 12-09 00:21 .
drwxr-xr-x 19 root root 4096 12-08 12:54 ..
-rw-r--r-- 1 nobody nogroup 10 12-09 00:21 plik.txt
root@debian2:~# _
```

Sprawdzamy na pierwszej maszynie:

```
root@debian:~# cat /home_2/plik.txt
nowy plik
root@debian:~#
```