

Лабораторная работа №14

Администрирование сетевых подсистем

Ищенко Ирина НПИбд-02-22

Российский университет дружбы народов, Москва, Россия

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

Выполнение лабораторной работы

```
complete
[root@server.ioithenko.net ~]# groupadd -g 1010 sambagroup
[root@server.ioithenko.net ~]# usermod -aG sambagroup ioithenko
[root@server.ioithenko.net ~]# mkdir -p /srv/smbashare
[root@server.ioithenko.net ~]# vi /etc/samba/smb.conf
[root@server.ioithenko.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
```

Рис. 1: Создание группы и разделяемого ресурса

```
root@server:~  
# 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 = IOITHENKO-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%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  
    write list = @printadmin root  
    force group = @printadmin  
    create mask = 0664  
    directory mask = 0775  
  
[smbashare]  
    comment = My Samba Share  
    path = /srv/smbashare  
    write list = @sambagroup
```

Рис. 2: Редактирование файла конфигурации /etc/samba/smb.conf

```
[root@server.ioithenko.net ~]# systemctl start smb
[root@server.ioithenko.net ~]# systemctl enable smb
Created symlink /etc/systemd/system/multi-user.target.wants/smb.service → /usr/lib/systemd/system/smb.service.
[root@server.ioithenko.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 2024-11-30 12:30:03 UTC; 16s ago
     Docs: man:smbd(8)
           man:samba(7)
           man:smb.conf(5)
    Main PID: 10613 (smbd)
      Status: "smbd: ready to serve connections..."
        Tasks: 3 (limit: 4555)
      Memory: 13.4M
         CPU: 159ms
    CGroup: /system.slice/smb.service
            └─10613 /usr/sbin/smbd --foreground --no-process-group
              └─10615 /usr/sbin/smbd --foreground --no-process-group
                └─10616 /usr/sbin/smbd --foreground --no-process-group

Nov 30 12:30:02 server.ioithenko.net systemd[1]: Starting Samba SMB Daemon...
Nov 30 12:30:02 server.ioithenko.net smbd[10613]: [2024/11/30 12:30:02.940206, >
Nov 30 12:30:02 server.ioithenko.net smbd[10613]:   smbd version 4.20.2 started.
Nov 30 12:30:02 server.ioithenko.net smbd[10613]:   Copyright Andrew Tridgell a>
Nov 30 12:30:03 server.ioithenko.net systemd[1]: Started Samba SMB Daemon.
lines 1-21/21 (END)
```

Рис. 3: Запуск демона и просмотр статуса

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

Sharename	Type	Comment
-----	----	-----
print\$	Disk	Printer Drivers
smbashare	Disk	My Samba Share
IPC\$	IPC	IPC Service (Samba 4.20.2)

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

Рис. 4: Проверка доступа к общему ресурсу

```
<?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 the samba package installed for this opti
on 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. 5: Просмотр файла конфигурации межсетевого экрана для Samba


```
root@server:~  
[root@server.ioithenko.net ~]# firewall-cmd --add-service=samba  
success  
[root@server.ioithenko.net ~]# firewall-cmd --add-service=samba --permanent  
success  
[root@server.ioithenko.net ~]# firewall-cmd --reload  
success  
[root@server.ioithenko.net ~]# chgrp sambagroup /srv/smbashare  
[root@server.ioithenko.net ~]# chmod g=rwx /srv/smbashare  
[root@server.ioithenko.net ~]# cd /srv  
[root@server.ioithenko.net srv]# ls -Z  
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:var_t:s0 sambashare  
[root@server.ioithenko.net srv]# semanage fcontext -a -t samba_share_t "/srv/sam  
bashare(/.*)?"  
[root@server.ioithenko.net srv]# restorecon -vR /srv/smbashare  
Relabeled /srv/smbashare from unconfined_u:object_r:var_t:s0 to unconfined_u:ob  
ject_r:samba_share_t:s0  
[root@server.ioithenko.net srv]# ls -Z  
unconfined_u:object_r:nfs_t:s0 nfs  
unconfined_u:object_r:samba_share_t:s0 sambashare  
[root@server.ioithenko.net srv]# setsebool samba_export_all_rw 1  
[root@server.ioithenko.net srv]# setsebool samba_export_all_rw 1 -P  
[root@server.ioithenko.net srv]# su ioithenko  
[ioithenko@server.ioithenko.net srv]$ uid  
bash: uid: command not found...  
  
[ioithenko@server.ioithenko.net srv]$  
[ioithenko@server.ioithenko.net srv]$ ^C  
[ioithenko@server.ioithenko.net srv]$ id  
uid=1001(ioithenko) gid=1001(ioithenko) groups=1001(ioithenko),10(wheel),1010(sa  
mbagroup) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023  
[ioithenko@server.ioithenko.net srv]$ cd /srv/smbashare  
[ioithenko@server.ioithenko.net sambashare]$ touch ioithenko@server.txt  
[ioithenko@server.ioithenko.net sambashare]$ ls  
ioithenko@server.txt  
[ioithenko@server.ioithenko.net sambashare]$ smbpasswd -L -a ioithenko  
smbpasswd -L can only be used by root.  
[ioithenko@server.ioithenko.net sambashare]$ sudo -i  
[sudo] password for ioithenko:  
[root@server.ioithenko.net ~]# smbpasswd -L -a ioithenko  
New SMB password:  
Retype new SMB password:  
Added user ioithenko.  
[root@server.ioithenko.net ~]#
```

Рис. 6: Изменение межсетевого экрана, создание файла на разделяемом ресурсе, добавление

```
<?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 use
  ful.</description>
  <include service="netbios-ns"/>
  <port protocol="udp" port="138"/>
</service>
/usr/lib/firewalld/services/samba-client.xml (END)
```

Рис. 7: Просмотр файла конфигурации межсетевого экрана для клиента Samba

```
[root@client.ioithenko.net ~]# firewall-cmd --add-service=samba-client
success
[root@client.ioithenko.net ~]# firewall-cmd --add-service=samba-client --permane
nt
usage: 'firewall-cmd --help' for usage information or see firewall-cmd(1) man pa
ge
firewall-cmd: error: unrecognized arguments: --permament
[root@client.ioithenko.net ~]# firewall-cmd --add-service=samba-client --permane
nt
success
[root@client.ioithenko.net ~]# firewall-cmd --reload
success
[root@client.ioithenko.net ~]# groupadd -g 1010 sambagroup
[root@client.ioithenko.net ~]# usermod -aG sambagroup ioithenko
[root@client.ioithenko.net ~]#
```

Рис. 8: Настройка межсетевого экрана на клиенте, создание группы и добавление пользователя

```
root@client:~  
# 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 = IOITHENKO-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%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  
    write list = @printadmin root  
    force group = @printadmin  
    create mask = 0664  
    directory mask = 0775  
:wq
```

Рис. 9: Изменение параметра

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

Sharename	Type	Comment
-----	----	-----
print\$	Disk	Printer Drivers
sambashare	Disk	My Samba Share
IPC\$	IPC	IPC Service (Samba 4.20.2)

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

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

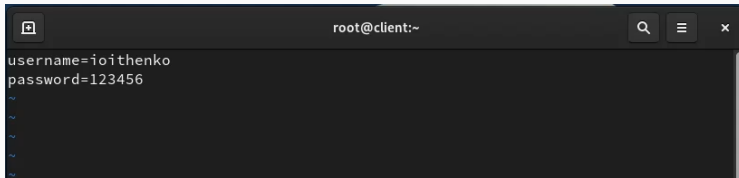
Sharename	Type	Comment
-----	----	-----
print\$	Disk	Printer Drivers
sambashare	Disk	My Samba Share
IPC\$	IPC	IPC Service (Samba 4.20.2)
ioithenko	Disk	Home Directories

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

Рис. 10: Проверка наличия общего доступа под разными пользователями

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

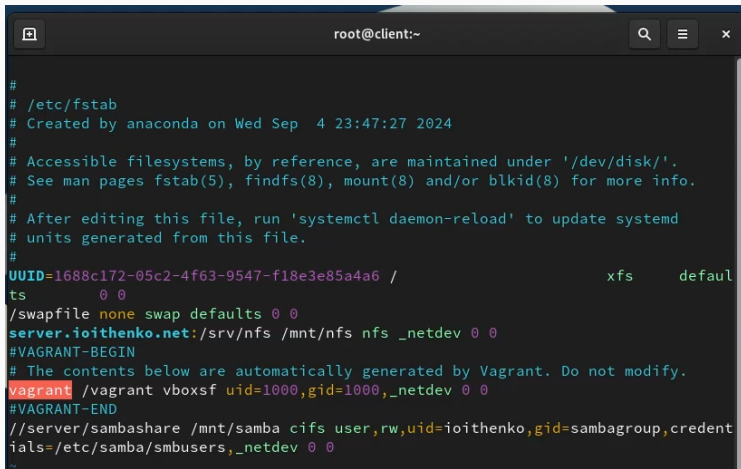
Рис. 11: Создание точки монтирования, проверка записи файлов на разделяемом ресурсе пользователем, отмонтирование каталога



A terminal window with a dark background. The title bar shows 'root@client:~' and standard window controls (minimize, maximize, close). The terminal content shows the file `/etc/samba/smbusers` being edited. The first two lines are `username=ioithenko` and `password=123456`. Below these are four lines, each starting with a tilde (~) character, representing empty lines in the file.

```
root@client:~  
username=ioithenko  
password=123456  
~  
~  
~  
~
```

Рис. 12: Редактирование файла `/etc/samba/smbusers`

A terminal window titled 'root@client:~' with search, menu, and close icons in the top right. The terminal displays the content of the /etc/fstab file. The text is as follows:

```
#  
# /etc/fstab  
# Created by anaconda on Wed Sep  4 23:47:27 2024  
#  
# 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=1688c172-05c2-4f63-9547-f18e3e85a4a6 / xfs default  
ts 0 0  
/swapfile none swap defaults 0 0  
server.ioithenko.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/smbashare /mnt/samba cifs user,rw,uid=ioithenko,gid=sambagroup,credentials=/etc/samba/smbusers,_netdev 0 0
```

Рис. 13: Редактирование /etc/fstab на клиенте


```
//server/smbashare on /mnt/samba type cifs (rw,nosuid,nodev,noexec,relatime,vers=3.1.1,cache=strict,username=ioithenko,uid=1001,noforceuid,gid=1010,noforcegid,addr=192.168.1.1,file_mode=0755,dir_mode=0755,soft,nounix,serverino,mapposix,rsize=4194304,wsize=4194304,bsize=1048576,echo_interval=60,actimeo=1,closetimeo=1)
server.ioithenko.net:/srv/nfs on /mnt/nfs type nfs4 (rw,relatime,vers=4.2,rsize=131072,wsize=131072,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)
tmpfs on /run/user/1001 type tmpfs (rw,nosuid,nodev,relatime,seclabel,size=78768k,nr_inodes=19692,mode=700,uid=1001,gid=1001,inode64)
gvfsd-fuse on /run/user/1001/gvfs type fuse.gvfsd-fuse (rw,nosuid,nodev,relatime,user_id=1001,group_id=1001)
[ioithenko@client.ioithenko.net samba]$
```

Рис. 14: Монтирование общего ресурса и проверка

```
[ioithenko@client.ioithenko.net ~]$ cd /mnt/samba
[ioithenko@client.ioithenko.net samba]$ touch test.txt
[ioithenko@client.ioithenko.net samba]$ ls
ioithenko@client.txt  ioithenko@server.txt  test.txt
```

Рис. 15: Проверка доступа к разделяемым ресурсам после перезагрузки

```
[root@client.ioithenko.net samba]# ls
[root@client.ioithenko.net samba]# smbclient -L //server -U ioithenko
Password for [IOITHENKO-NET\ioithenko]:

      Sharename      Type      Comment
      -----      -
      print$         Disk      Printer Drivers
      sambashare     Disk      My Samba Share
      IPC$           IPC       IPC Service (Samba 4.20.2)
      ioithenko      Disk      Home Directories
SMB1 disabled -- no workgroup available
[root@client.ioithenko.net samba]#
```

Рис. 16: Проверка доступа к разделяемым ресурсам после перезагрузки

В ходе выполнения лабораторной работы я приобрела навыки настройки доступа групп пользователей к общим ресурсам по протоколу SMB.