File Server

Workshop Administrasi Jaringan

Praktikum ke 5

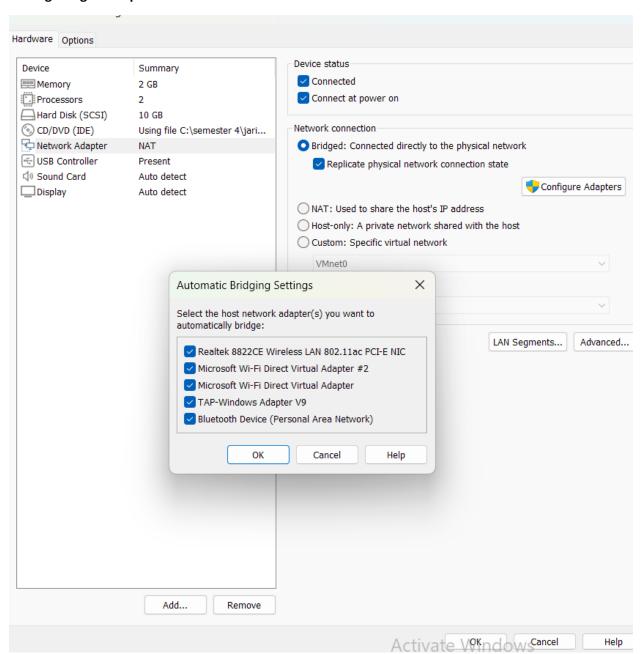


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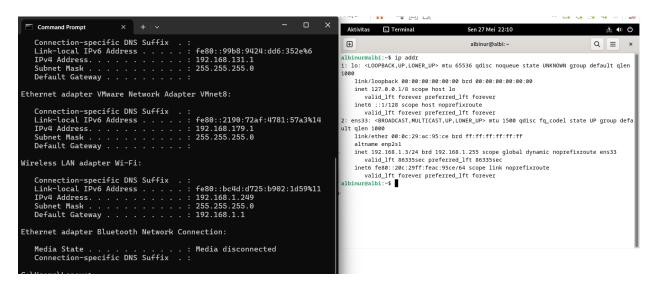
PRODI D3 TEKNIK INFORMATIKA
DEPARTEMEN TEKNIK INFORMATIKA DAN KOMPUTER
PENS PSDKU SUMENEP

Samba File Server

Setting Bridged Adapter untuk VMWare



Restart Linux lalu cek nomor IP VM Linux dan IP Windows



Jika alamat IP sudah benar maka selanjutnya

Ping dari linux ke windows dan sebaliknya

1. Samba Server ⇔ Samba Client (Windows)

1. Instalasi Samba Server

Version 4.17.12-Debian

root@albi:~#

```
Update linux
albinur@albi:~$ su - root
Sandi:
root@albi:~# apt update
Hit:1 http://deb.debian.org/debian bookworm InRelease
Hit:2 http://deb.debian.org/debian bookworm-updates InRelease
Hit:3 http://security.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
79 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@albi:~#
Install samba
root@albi:~# apt install samba
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  attr ibverbs-providers libcephfs2 libfmt9 libgfapi0 libgfrpc0 libgfxdr0
  libqlusterfs0 libibverbs1 librados2 librdmacm1 liburing2 python3-anyio
  python3-click python3-colorama python3-dnspython python3-gpg python3-h11 python3-
  python3-hpack python3-httpcore python3-httpx python3-hyperframe python3-ldb
  python3-markdown python3-markdown-it python3-mdurl python3-pygments
  python3-requests-toolbelt python3-rfc3986 python3-rich python3-samba
  python3-sniffio python3-talloc python3-tdb python3-yaml samba-ad-provision
  samba-common samba-common-bin samba-dsdb-modules samba-vfs-modules tdb-tools
Cunnected nackanes.
Cek versi samba
root@albi:~# smbstatus --version
```

2. Konfigurasi Samba Server

File konfigurasi samba disimpan di /etc/samba/smb.conf.

• Backup dulu file aslinya

#cp /etc/samba/smb.conf /etc/samba/smb.conf.orig

• Buka file smb.conf

#nano /etc/samba/smb.conf

• Pada baris paling bawah, ketikkan baris berikut.

```
\oplus
                                       albinur@albi: ~
GNU nano 7.2
                                    /etc/samba/smb.conf *
# Windows clients look for this share name as a source of downloadab
# printer drivers
[print$]
   comment = Printer Drivers
   path = /var/lib/samba/printers
   browseable = yes
   read only = yes
   guest ok = no
# Uncomment to allow remote administration of Windows print drivers.
# You may need to replace 'lpadmin' with the name of the group your
# admin users are members of.
# Please note that you also need to set appropriate Unix permissions
# to the drivers directory for these users to have write rights in i
; write list = root, @lpadmin
[share]
        path = /media/samba/testing
        browseable = yes
        read only = No
        valid users = @sambauser
```

Tes konfigurasi samba

```
root@albi:/etc/samba# 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]
       log file = /var/log/samba/log.%m
       logging = file
        map to guest = Bad User
        max log size = 1000
        obey pam restrictions = Yes
        pam password change = Yes
        panic action = /usr/share/samba/panic-action %d
        passwd chat = *Enter\snew\s*\spassword:* %n\n *Retype\snew\s*\spassword:* %n\n
*password\supdated\ssuccessfully* .
        passwd program = /usr/bin/passwd %u
        server role = standalone server
        unix password sync = Yes
        usershare allow guests = Yes
        idmap config * : backend = tdb
[homes]
        browseable = No
        comment = Home Directories
        create mask = 0700
        directory mask = 0700
        valid users = %S
[printers]
        browseable = No
comment = All Printers

Global parameters
[global]
       log file = /var/log/samba/log.%m
        create mask = 0700
        path = /var/tmp
        printable = Yes
[print$]
        comment = Printer Drivers
        path = /var/lib/samba/printers
[share]
        path = /media/samba/testing
        read only = No
        valid users = @sambauser
```

3. Membuat user dan grup untuk Samba Server

Buat user baru

```
root@albi:/etc/samba# adduser albi
   Adding user `albi' ...
   Adding new group `albi' (1001) ...
   Adding new user `albi' (1001) with group `albi (1001)' ...
   Creating home directory `/home/albi' ...
   Copying files from `/etc/skel' ...
   New password:
   Retype new password:
   passwd: kata sandi diperbaharui dengan sukses
   Mengubah informasi pengguna dari albi
   Masukkan nilai baru atau tekan ENTER untuk nilai bawaan
           Nama Lengkap []: albi
           Nomor Ruangan []:
           Telepon Kantor []:
           Telepon Rumah []:
           Lain-lain []:
   Is the information correct? [Y/n] y
   Adding new user `albi' to supplemental / extra groups `users' ...
   Adding user `albi' to group `users' ...
   root@albi:/etc/samba#
• Set samba password untuk user albi
    root@albi:/etc/samba# smbpasswd -a albi
    New SMB password:
    Retype new SMB password:
    Added user albi.
   root@albi:/etc/samba#

    Buat grub baru

    root@albi:/etc/samba# addgroup sambauser
    Adding group `sambauser' (GID 1002) ...
    root@albi:/etc/samba#
• Tambahkan albi di grub
     root@albi:/etc/samba# usermod -a -G sambauser albi

    Cek apakah albi sudah berada digrub

    root@albi:/etc/samba# id albi
    uid=1001(albi) gid=1001(albi) groups=1001(albi),100(users),1002(sambauser)
    root@alhi./etc/camha#
```

4. Membuat directory Samba Server

- Direktory samba yang kita akan share terletak di /media/samba/testing
- Kita buat dulu direktory tersebut

#mkdir/media/samba

#mkdir /media/samba/testing

#cd /media/samba

#ls -l

• Sekarang ubah ownership dari direktory tersebut. User ownership adalah albi, group ownership adalah sambauser

#chown albi:sambauser testing

```
root@albi:~# mkdir /media/samba
root@albi:~# mkdir /media/samba/testing
root@albi:~# cd /media/samba
root@albi:/media/samba# ls -1
total 4
drwxr-xr-x 2 root root 4096 Mei 27 23:53 testing
root@albi:/media/samba# chown albi:sambauser testing
root@albi:/media/samba# ls -1
total 4
drwxr-xr-x 2 albi sambauser 4096 Mei 27 23:53 testing
root@albi:/media/samba#
```

- Setelah ownership directory testing kita ganti, maka berikutnya kita ubbah hak aksesnya
- Kita akan ganti agar user dan group boleh melakukan read, write dan execute pada direktory testing #chmod 770 testing
- 770 berarti : user dan group = read, write dan execute other : tidak memiliki hak apapun

```
root@albi:/media/samba# chmod 770 testing
root@albi:/media/samba# ls -l
total 4
drwxrwx--- 2 albi sambauser 4096 Mei 27 23:53 testing
root@albi:/media/samba#
```

5. Restart samba

- Setiap kali file konfigurasi berubah, anda harus merestart samba server
- Cek statusnya apakah running

```
root@albi:/media/samba# systemctl restart smbd
root@albi:/media/samba# systemctl status smbd

    smbd.service - Samba SMB Daemon

     Loaded: loaded (/lib/systemd/system/smbd.service; enabled; preset: enabled)
     Active: active (running) since Mon 2024-05-27 23:59:00 WIB; 10s ago
       Docs: man:smbd(8)
             man:samba(7)
            man:smb.conf(5)
   Process: 5613 ExecCondition=/usr/share/samba/is-configured smb (code=exited, statu>
   Process: 5615 ExecStartPre=/usr/share/samba/update-apparmor-samba-profile (code=ex
  Main PID: 5624 (smbd)
    Status: "smbd: ready to serve connections..."
     Tasks: 3 (limit: 2252)
    Memory: 5.7M
        CPU: 1.066s
     CGroup: /system.slice/smbd.service
             -5624 /usr/sbin/smbd --foreground --no-process-group
             -5626 /usr/sbin/smbd --foreground --no-process-group
             L_5627 /usr/sbin/smbd --foreground --no-process-group
Mei 27 23:58:59 albi systemd[1]: Starting smbd.service - Samba SMB Daemon...
Mei 27 23:59:00 albi systemd[1]: Started smbd.service - Samba SMB Daemon.
lines 1-20/20 (END)
                                                               Activate Windows
```

6. Testing Samba Client secara lokal

- Untuk testing samba client secara lokal, anda harus menginstall 2 aplikasi, vaitu cifs-utils dan smbclient
- Di Samba server :

#apt install cifs-utils smbclient

Kemudian kita test dengan #smbclient '\localhost\<dir>'-U <user>

- Masukkan password
- Anda berhasil masuk jika muncul prompt smb: \>
- Keluar dengan quit

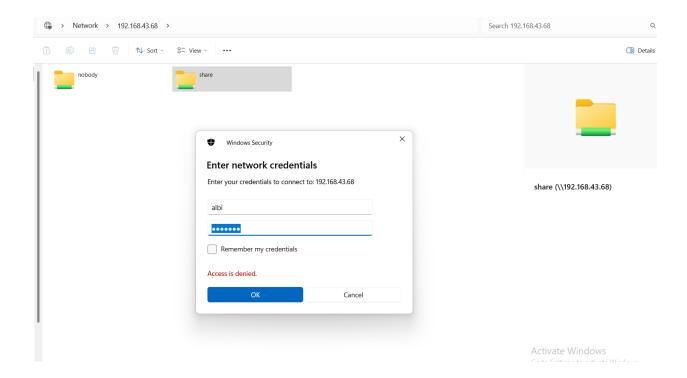
```
root@albi:/media/samba# apt install cifs-utils smbclient
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
 kevutils
Suggested packages:
 winbind heimdal-clients
The following NEW packages will be installed:
 cifs-utils keyutils smbclient
0 upgraded, 3 newly installed, 0 to remove and 79 not upgraded.
Need to get 591 kB of archives.
After this operation, 2.516 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://deb.debian.org/debian bookworm/main amd64 cifs-utils amd64 2:7.0-2 |
Get:2 http://deb.debian.org/debian bookworm/main amd64 keyutils amd64 1.6.3-2 [54
Get:3 http://deb.debian.org/debian bookworm/main amd64 smbclient amd64 2:4.17.124
+deb12u1 [442 kB]
Fetched 591 kB in 3s (176 kB/s)
Selecting previously unselected package cifs-utils.
(Sedang membaca basis data ... 149529 berkas atau direktori telah terpasang.)
Preparing to unpack .../cifs-utils_2%3a7.0-2_amd64.deb ...
Unpacking cifs-utils (2:7.0-2) ...
Selecting previously unselected package kevutils. Activate Windo
Preparing to unpack .../smbclient_2%3a4.17.12+dfsg-0+deb12u1_amd64.deb ...
Unpacking smbclient (2:4.17.12+dfsg-0+deb12u1) ...
Sedang menata cifs-utils (2:7.0-2) ...
update-alternatives: using /usr/lib/x86_64-linux-gnu/cifs-utils/idmapwb.so to provide
etc/cifs-utils/idmap-plugin (idmap-plugin) in auto mode
Sedang menata smbclient (2:4.17.12+dfsg-0+deb12u1) ...
Sedang menata keyutils (1.6.3-2) ...
Processing triggers for man-db (2.11.2-2) ...
root@albi:/media/samba#
```

```
root@albi:/media/samba# smbclient '\\localhost\share' -U albi
Password for [WORKGROUP\albi]:
Try "help" to get a list of possible commands.
smb: \> help
               allinfo
                               altname
                                              archive
                                                              backup
blocksize
               cancel
                               case_sensitive cd
                                                              chmod
chown
               close
                               del
                                              deltree
                                                              dir
               echo
                                                              getfacl
du
                               exit
                                              get
geteas
               hardlink
                               help
                                              history
                                                              iosize
lcd
               link
                               lock
                                              lowercase
                                                              ls
1
                                                              mkdir
               mask
                               md
                                              mget
               mput
                               newer
                                              notify
                                                              open
more
               posix_encrypt
                                              posix_mkdir
                                                              posix_rmdir
posix
                               posix_open
posix_unlink
               posix_whoami
                               print
                                              prompt
                                                              put
                                                              readlink
pwd
                               queue
                                              quit
               q
rd
               recurse
                                              rename
                                                              reput
                               reget
               rmdir
                                              setea
                                                              setmode
rm
                               showacls
scopy
               stat
                               symlink
                                              tar
                                                              tarmode
timeout
               translate
                                              volume
                                                              vuid
                               unlock
wdel
               logon
                               listconnect
                                              showconnect
                                                              tcon
tdis
               tid
                               utimes
                                              logoff
smb: \>
```

Activate Winds

7. Testing dari Samba Client (Windows)

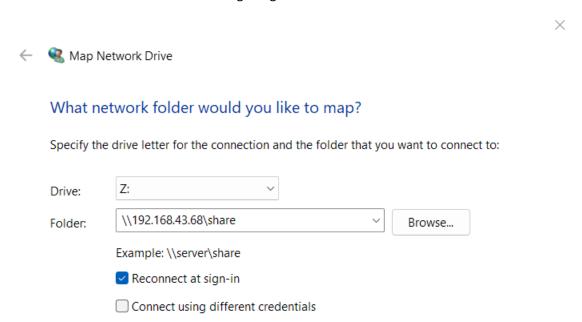
- Lihat ke Windows anda yang berfungsi sebagai host PC untuk VM Linux
- Buka Run
- Masukkan nomor IP Samba server dan direktory yang dishared oleh samba
- Klik Browse
- Masukkan user samba dan passwordnya
- Klik OK
- Explorer membuka window seperti dibawah
- Jika folder share diklik ternyata masih kosong

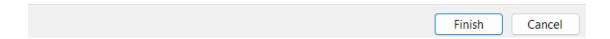


Kita akan menambahkan file dan direktory di share folder

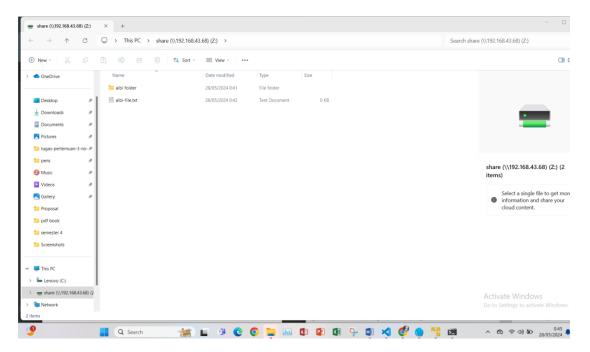
Caranya?

- Buka Windows Explorer
- Klik Network
- Klik Map Network Drive
- Masukkan nomor IP Server dan direktory samba
- Klik Reconnect..
- Klik Finish
- Maka, anda akan melihat
- Klik folder Z
- Disebelah kanan, buat directory dan file baru
- Samba server sudah berhasil sharing dengan windows client





Connect to a Web site that you can use to store your documents and pictures.



Samba server sudah berhasil sharing dengan windows client

2. Samba Server ⇔ Samba Client (Linux)

1. Setting Samba Server

- Sekarang kita akan bermain-main dengan Samba server
- Sekarang anda akan memiliki beberapa folder Samba dengan konfigurasi berbeda
- o Folder [temp], dapat diakses oleh semua orang, termasuk guest, namun semua file dan direktorynya tidak dapat dihapus atau ditambah
- o Folder [userdir], artinya hanya user tersebut yang boleh mengakses folder tersebut. User tersebut berhak menambah atau menghapus file di foldernya o Folder [sambauser], hanya dapat diakses oleh anggota grup. Semua anggota grup boleh mengakses, menambah dan menghapus file dan direktory
- Ada 2 user:
- O Julian, group: sambauser, memiliki userdir/media/samba/julian
- O Haaland, group: haaland, memiliki userdir/media/samba/haaland

2. Buat User, Setting Direktory di Server

• Buat user haaland dulu. User julian telah kita buat sebelumnya. Cek grupnya

#adduser haaland

#id haaland

```
#smbpasswd -a haaland
root@albi:~# adduser bee
Adding user `bee' ...
Adding new group `bee' (1004) ...
Adding new user `bee' (1004) with group `bee (1004)' ...
Creating home directory `/home/bee' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: kata sandi diperbaharui dengan sukses
Mengubah informasi pengguna dari bee
Masukkan nilai baru atau tekan ENTER untuk nilai bawaan
        Nama Lengkap []:
        Nomor Ruangan []:
        Telepon Kantor []:
        Telepon Rumah []:
        Lain-lain []:
Is the information correct? [Y/n] y
Adding new user `bee' to supplemental / extra groups `users' ...
Adding user `bee' to group `users' ...
root@albi:~# id bee
uid=1004(bee) gid=1004(bee) groups=1004(bee),100(users)
root@albi:~# smbpasswd -a bee
New SMB password:
Retype new SMB password:
Added user bee.
```

• Buat direktory untuk folder-folder tersebut

```
#mkdir/media/samba/temp
```

#mkdir/media/samba/sambauser

#mkdir/media/samba/haaland

#mkdir/media/samba/julian

```
root@albi:~# mkdir /media/samba/temp
root@albi:~# mkdir /media/samba/sambauser
root@albi:~# mkdir /media/samba/bee
root@albi:~# mkdir /media/samba/albi
root@albi:~#
```

• Ubah ownership user dan grup

#chown root:sambauser /media/samba/temp

#chown root:sambauser /media/samba/sambauser

#chown julian:julian /media/samba/julian

#chown haaland:haaland /media/samba/haaland

```
root@albi:~# chown root:sambauser /media/samba/temp
root@albi:~# chown root:sambauser /media/samba/sambauser
root@albi:~# chown albi:albi /media/samba/albi
root@albi:~# chown bee:bee /media/samba/bee
root@albi:~#
```

• Ubah hak aksesnya, agar bisa diakses oleh Linux Client

#chmod -R 777 /media/samba/

#ls -l /media/samba/

3. Konfigurasi Samba Server

• Buka file konfigurasi samba dan ketikkan baris berikut.

#nano /etc/samba/smb.conf

• Sebelum Share Definitions, tambahkan baris berikut : client min protocol =NT1

• Beri tanda # untuk menonaktifkan konfigurasi sebelumnya [share] .

```
#[share]
# path = /media/samba/testing
# browseable = yes
# read only = no
valid users = @sambauser
```

• Tambahkan baris berikut padabagian bawah

```
valid users = @sambauser
[temp]
       path = /media/samba/temp
       browseable = yes
       read only = yes
       guest ok = yes
[sambauser]
       path = /media/samba/sambauser
       browseable = yes
       read only = no
       valid users = @sambauser
[user]
       path = /media/samba/%U
       browseable = no
       read only = no
       valid users = %U
```

• Cek dengan testparm. Lihat ke baris paling bawah

```
[print$]
       comment = Printer Drivers
       path = /var/lib/samba/printers
[temp]
       guest ok = Yes
       path = /media/samba/temp
[sambauser]
       path = /media/samba/sambauser
       read only = No
       valid users = @sambauser
[user]
       browseable = No
       path = /media/samba/%U
       read only = No
       valid users = %U
root@albi:~#
```

4. Restart Samba dan Testing localhost di Server

• Sekarang restart samba dan cek statusnya

#systemctl restart smb

#systemctl status smb

```
root@albi:~# systemctl restart smb
root@albi:~# systemctl status smb

    smbd.service - Samba SMB Daemon

     Loaded: loaded (/lib/systemd/system/smbd.service; enabled; preset: enabled)
     Active: active (running) since Tue 2024-05-28 14:52:16 WIB; 13s ago
       Docs: man:smbd(8)
              man:samba(7)
              man:smb.conf(5)
    Process: 3230 ExecCondition=/usr/share/samba/is-configured smb (code=exited, status
    Process: 3232 ExecStartPre=/usr/share/samba/update-apparmor-samba-profile (code=ex
   Main PID: 3242 (smbd)
     Status: "smbd: ready to serve connections..."
      Tasks: 3 (limit: 2252)
     Memory: 5.5M
        CPU: 290ms
     CGroup: /system.slice/smbd.service
              3242 /usr/sbin/smbd --foreground --no-process-group
3244 /usr/sbin/smbd --foreground --no-process-group
3245 /usr/sbin/smbd --foreground --no-process-group
Mei 28 14:52:16 albi systemd[1]: Starting smbd.service - Samba SMB Daemon...
Mei 28 14:52:16 albi systemd[1]: Started smbd.service - Samba SMB Daemon.
lines 1-20/20 (END)
```

• Coba kita test dengan smbclient untuk 3 folder [tmp], [sambauser], [haaland] dan

۱۸/

[julian]

• Untuk folder, milik user, julian dan haaland berhasil masuk ke foldernya

masing-masing

```
root@albi:~# cd /media/samba
root@albi:/media/samba# smbclient '\\localhost\albi' -U albi
Password for [WORKGROUP\albi]:
Try "help" to get a list of possible commands.
smb: \> exit
root@albi:/media/samba#
```

• Untuk anonymous atau guest, kita tidak akan memasukkan password

User guest gagal masuk ke folder haaland

• Bagaimana dengan folder [tmp] dan [sambauser]?

```
root@albi:~# smbclient '\\localhost\tmp' -U albi
Password for [WORKGROUP\albi]:
tree connect failed: NT_STATUS_BAD_NETWORK_NAME
root@albi:~# smbclient '\\localhost\tmp' -U bee
Password for [WORKGROUP\bee]:
tree connect failed: NT_STATUS_BAD_NETWORK_NAME
root@albi:~# smbclient '\\localhost\tmp' -U
Password for [WORKGROUP\root]:
tree connect failed: NT_STATUS_BAD_NETWORK_NAME
root@albi:~#
```

- Folder tmp tidak dapat diakses olah julian,haaland dan guest
- Folder sambauser hanya dapatdiakses oleh anggota grupsambauser, yaitu julian
- User haaland dan guest tidak dapatmengakses folder tersebut

```
root@albi:~# smbclient '\\localhost\sambauser' -U albi
Password for [WORKGROUP\albi]:
Try "help" to get a list of possible commands.
smb: \> exit
root@albi:~# smbclient '\\localhost\sambauser' -U bee
Password for [WORKGROUP\bee]:
tree connect failed: NT_STATUS_ACCESS_DENIED
root@albi:~# smbclient '\\localhost\sambauser' -U
Password for [WORKGROUP\root]:
tree connect failed: NT_STATUS_ACCESS_DENIED
root@albi:~#
```

• Untuk folder tmp, buatlah 2 file: tmp1 dan tmp2, 1 directory: tempdir

```
root@albi:~# cd /media/samba/temp
root@albi:/media/samba/temp# mkdir tempdir
root@albi:/media/samba/temp# touch tmp1 tmp2
root@albi:/media/samba/temp#
```

- 5. Testing smbclient dari Samba Client
- Sekarang, kita akan coba akses samba server dari Linux samba client
- Jalankan VM untuk Linux Client
- Install software samba client

#apt install cifs-utils smbclient

```
root@albi:~# apt install cifs-utils smbclient
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
cifs-utils is already the newest version (2:7.0-2).
smbclient is already the newest version (2:4.17.12+dfsg-0+deb12u1).
0 upgraded, 0 newly installed, 0 to remove and 79 not upgraded.
root@albi:~#
```

• Jalankan utilitas smbclient untuk folder [sambauser]. User julian dapat mengakses

folder tersebut, tapi user halaland tidak

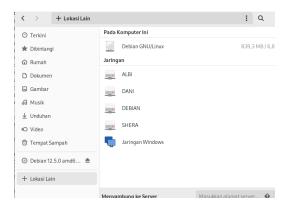
```
root@albi:~# smbclient //192.168.1.70/sambauser -U bee
Password for [WORKGROUP\bee]:
tree connect failed: NT_STATUS_ACCESS_DENIED
root@albi:~# smbclient //192.168.1.70/sambauser -U albi
Password for [WORKGROUP\albi]:
Try "help" to get a list of possible commands.
smb: \>
```

6. Memakai Files di Samba Client untuk Akses Server

- Agar bisa menggunakan mode grafis, gunakan cara berikut
- Buka Activities, pada search, ketik Files



• Klik Other Locations



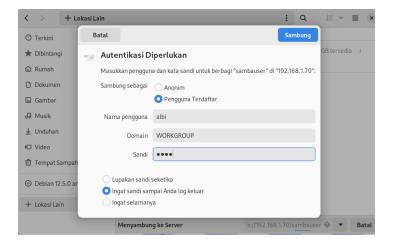
• Pada Connect to Sever, ketikkan

smb://<no-ip-samba-server>/<foldersamba>

• Folder samba yang kita test adalah [sambauser] smb://192.168.48.81/sambauser

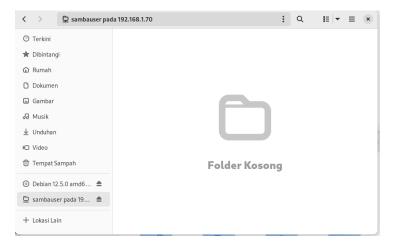
Klik Connect

Masukkan username dan password user



- Klik Remember password ...
- Klik Connect

• Jika berhasil, anda akan masuk ke window berikut



- Buat direktory dan file di [sambauser]
- Klik New Folder
- Masukkan nama direktory dan klik Create



• Berhasil

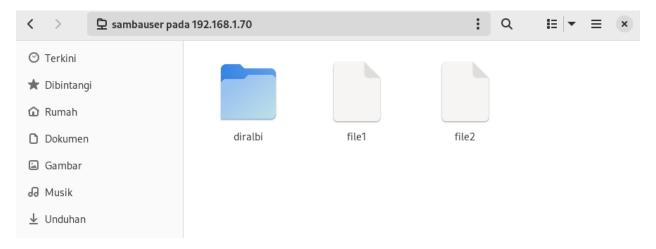


- Sekarang buat file di [sambauser],
- Klik Open in Terminal
- Ketikkan :

#touch file1 file2

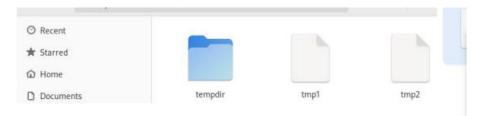


- Disconnect folder sambauser
- Klik Other Locations
- Masukkan ip dan folder samba server
- Klik Connect
- Berhasil, ada 2 file

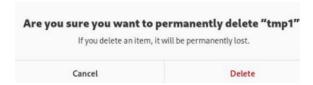


- Lakukan hal yang sama untuk user haaland pada folder [tmp]
- Sebelumnya Disconnect dulu folder [sambauser] dan logout
- Buka Files dan lakukan smb://192.168.48.81/
- Klik tmp.
- Gunakan Anonymous untuk login sebagai guest
- Klik Connect

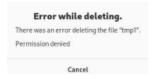
Berhasil



- Coba hapus tmp1
- Klik Delete Permanently...



• Klik Delete



- Gagal
- Klik folder tempdir, buatlah file di dalam directory tersebut

albinur@albi:/run/user/1000/gvfs/smb-share:server=192.168.1.70,share:
touch anon1

• Gagal juga

- Sebagai user haaland, coba test folder [sambauser] dan [haaland]
- Coba masuk ke folder [sambauser], jika berhasil buat file disana. Bagaimana?

Berhasilkah?

gagal

• Coba masuk ke folder [haaland], jika berhasil buat file disana. Bagaimana?

Berhasilkah?

gagal