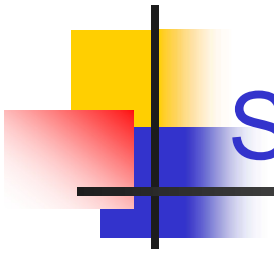
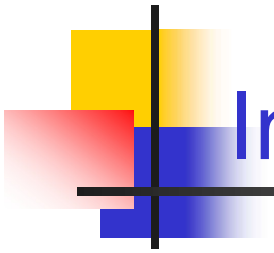


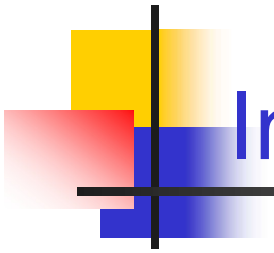
Samba Service

- **Samba** is an open-source software service on Unix/Linux systems.
- Designed for **files** and **printer** sharing for Windows and/or Linux clients (with a graphical interface).
- Samba replaces the Windows server, based on SMB (Server Message Block) for resource sharing.
- An implementation of the SMB and Active Directory protocols for Linux and UNIX-like systems.



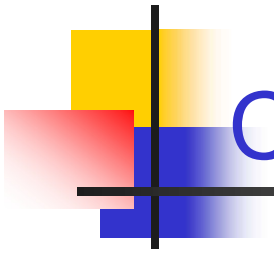
Installation de Samba

- In 1992, **Andrew Tridgell** developed a sharing protocol for Unix.
- Compatible with Microsoft SMB.
- Named Samba. (SaMBa).
- Distributed under the GNU/Linux licence from 1997 onwards.



Installation de Samba

- Samba combines several protocols:
- NetBIOS over TCP/IP:
- CIFS: (Common Internet File System) now called SMB2.
- Wins (Windows Internet Name Service).



Composantes de Samba

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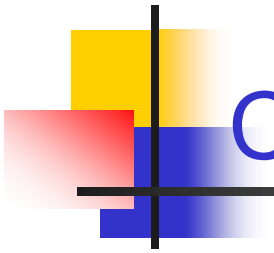
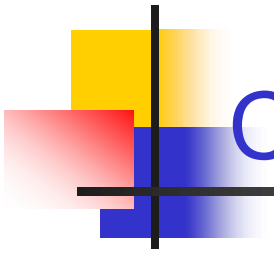


Composantes de Samba

- **nmbd**: The daemon understands and responds to NetBIOS name service requests.
- Plays a role in the browsing protocols that make up the Windows network neighbourhood display.
- Operates on port 137.
- It is controlled by the nmb service.



Composantes de Samba

- **winbind**: The service resolves information about users and groups on a Windows NT server and makes it usable by UNIX platforms.
- Uses the RPC protocol.
- Controlled by the smb service.

Installation of Samba

- Update system:
- **`apt update && sudo apt upgrade -y`**
- Install Samba:
- **`apt install samba -y`**
- Verify:
- **`smbd --version`** Or **`systemctl status smbd`**

Samba configuration

- ***/etc/samba/smb.conf***

- **Composed of several sections** :
- Defining the different types of sharing.
- Files.
- Printers.
- Sharing modes.
- Actions permitted on shares.

Samba configuration

```
#==== Globle configuration ================
[global]
workgroup = The_Work_Group
security = Security_mode
map to guest = <Action with Invalid count>
#== Share  ================
[Share]
path = Path_of_Shared_Dir
Browsable=<yes or no>
writable = <yes or no>
guest ok = <guest user allowed yes or no>
read only = <yes ot no>
```

Samba configuration

- **Workgroup**:workgroup of windows users.

With cmd or in control panel :

```
C:\> net config workstation
```

- **security**: Determines the security mode used for sharing it can be:
- **share**: sharing is performed without any security.
- **user**: access is subject to authentication by Samba account.
- **Domain**: authentication is performed by a domain name.

Samba configuration

- **map to guest**: Determines the action to be taken in the event of invalid authentication:
  - **never**: login with an invalid account is rejected (default).
  - **bad user**: it will be treated as a guest account.
- **path** : Define the shared directory /share
- **browsable** : Client can browse the shared directory.
- **writable** : Write allowed.
- **guest ok** : if yes no password is needed.
- **read only** : yes or no.

Samba configuration

```
#==== Global configuration ================
[global]
workgroup = WORKGROUP
security = share
map to guest = bad user
#== Définition du partage ================
[Partage]
path = /myshare
browsable =yes
writable = yes
guest ok = yes
read only = no
```

Samba configuration

- Restart samba service:

```
Systemctl restard smbd
```

- Create a user for example **smbuser** and activates it for samba service by command:

```
smbpasswd -a smbuser
```

Samba configuration

- To test the samba service, we can use the host machine as a client. In this case use host only mode.
- In file browser in the client : **`\\IP_Samba_Server\`**

Samba configuration

- **To test** the samba service (use host only mode).
- We can mount the shared direcory on client machine by **cmd** command:

```
net use  Z: \\ServiIP\ShareDirectory
```

- For example

```
net use Z: \\192.168.56.150\Share
```

```
C:\Users\akram>net use z: \\192.168.56.150\share
The command completed successfully.
```

Samba configuration

- To show the shared directories, use: **`net use`**

```
C:\Users\akram>net use
New connections will be remembered.


Status       Local     Remote                    Network

-------------------------------------------------------------------------------
OK           Z:        \\192.168.56.150\share    Microsoft Windows Network
The command completed successfully.
```

- To **unmount** the shared drive (z:) use
- **`net use * /delete`**