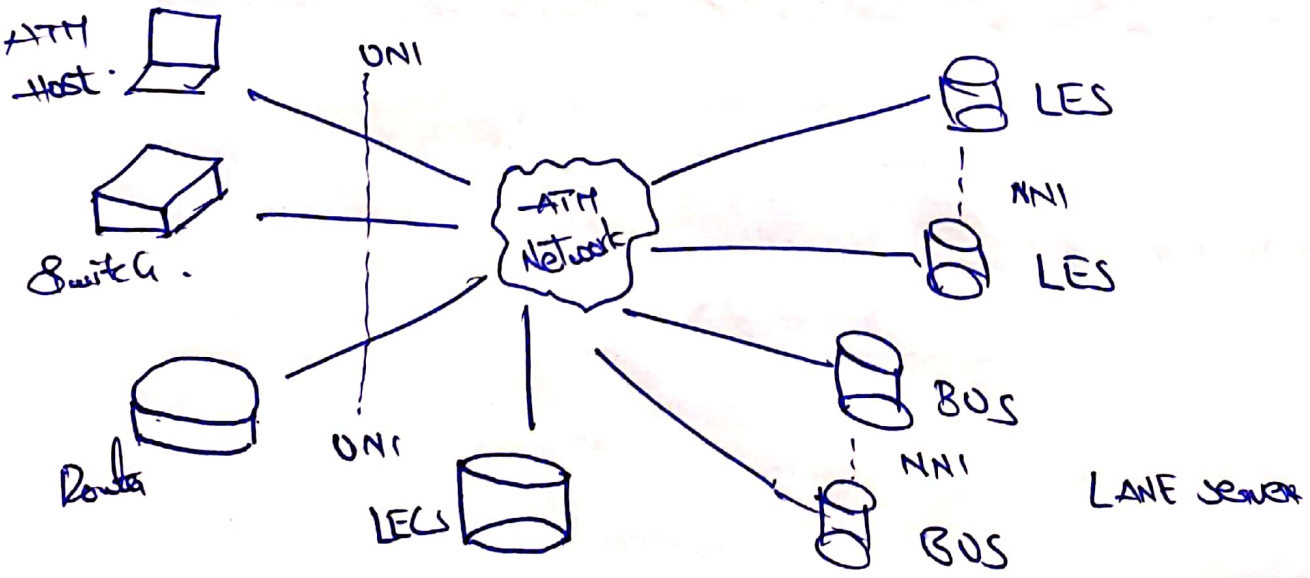
ATM LAN Emulation

* LAN Emulation, also known as LANE, is an ATM technology that enables LAN traffic such as Ethernet frames to be carried over an ATM network.
* LAN emulation (LANE) lets you use ATM as a backbone for connecting LANs.
* ATM and Ethernet technologies are difficult to connect because ATM is a connection-oriented technology and Ethernet is a broadcast-based connectionless technology.
* Ethernet frames and ATM cells are different in format and addressing.
* It must support MAC-to-ATM address mapping.



* When an user on an ATM network wants to access a resource on the Ethernet LAN, the client sends an address resolution message (ARM) to the LANE Server.
* which forwards the message to a bridge or router connected to the Ethernet.
* If bridge or router knows the destination mac address, it acts as a proxy and forwards the message to the destination client.
* If it doesn't know the destination mac address it relays the message to the broadcast unknown Server (BUS).

LANE Operation:-

* Frames Converted to cells by SAR.
* Maps Ethernet Add to ATM Add.

LANE Components :-

* four Components
    1) LAN Emulation Client (LEC)
    2) LAN Emulation Server (LES)
    3) Broadcast and Unknown Server (BUS)
    4) LAN Emulation and Configuration Server (LECS).

LEC:-

+ Emulates a LAN station over an ATM end station. This device enables communication among ATM end stations [or between ATM end stations and end stations on connected legacy LANs.

LES:-

+ Resolves MAC addresses for 802.3 LANs and source route descriptors for 802.5 LANs into ATM addresses.

+ All LECs are required to connect to the LES.

BUS:-

+ Forwards initial unicast data with unknown ATM addresses, broadcast data and multicast data.

+ All LECs are required to connect to the BUS.

LECS:-

+ Provides Configuration information for the LECs.