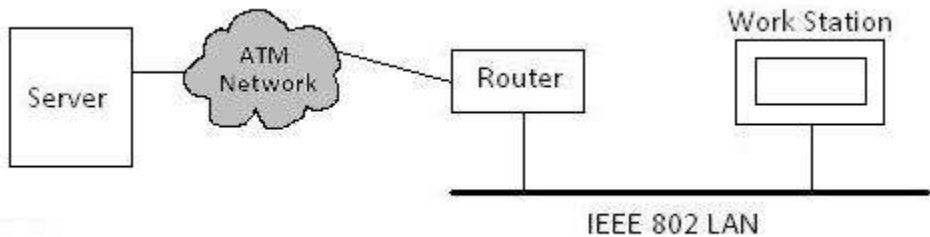


What is Router?

The following section describes 'what is router' with respect to networking.

The following section describes 'what is router' with respect to networking. A device used to link two or more networks. Router operates at OSI layer 3. Internetworking among dissimilar sub networks is achieved by using routers to interconnect the sub networks. Essential that the router must perform include the following. 1. Provide a link between networks 2. Does routing of data between processes running on two end systems which are on two different networks and hence delivery of data happens. 3. Hence networking architecture of sub-networks need not have to be changed to interoperate both. Let us understand router's main task of internetworking with following example. Following figure depicts how router does internetworking between ATM connected server and 802 LAN connected work station.



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As mentioned in above figure this router will have protocols up to Layer3 for both ATM as well as LAN networks. This router takes care of both server and work station communicates with each other.

1. When TCP/IP packet comes from server to router, router will remove ATM protocol headers and insert LAN compatible headers from Layer 1 to Layer 3 and pass packet to LAN networks. 2. Similarly when TCP/IP packet comes from work station to router, router will remove LAN protocol headers and insert ATM compatible headers from Layer 1 to Layer 3 and pass packet to ATM networks. Following figure describes protocols at ATM based server, LAN based work station and protocols at router. This figure is taken from book by william stallings as mentioned below to describe routing concept.

Application
TCP
IP
ATM
Physical

ATM based server

IP	
ATM	LLC
	MAC
Physical	Physical

(ATM -LAN Router)

Application
TCP
IP
LLC
MAC
Physical

LAN based work station

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Today there are routers available for latest broadband technologies viz. LTE, WiMAX and so on

which takes care of interworking as explained to make to different networks talk to each other.
Reference book: Wireless Communications and Networking by William Stallings

Router Vendors:

[WLAN Router](#): This page covers various popular wifi router suppliers with technical specifications. It covers DLINK, Linksys and Netgear.

[LTE routers](#): This page covers various LTE and wimax router suppliers with specifications. It covers LTE routers which can be interfaced with wimax networks on one side and LTE on the other side.