SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

19ECE308- WIRELESS TECHNOLOGIES FOR IOT

UNIT-II ARCHITECTURE AND DESIGN PRINCIPLES FOR IOT

TOPIC 2 –Internet Based Communication

Source-end network layer

- Communicate with IoT/M2M IoT Apps and Services layer

- Uses TCP/IP suite of Application protocols

- Connect through set of IP routers for sending data packets from an IP address
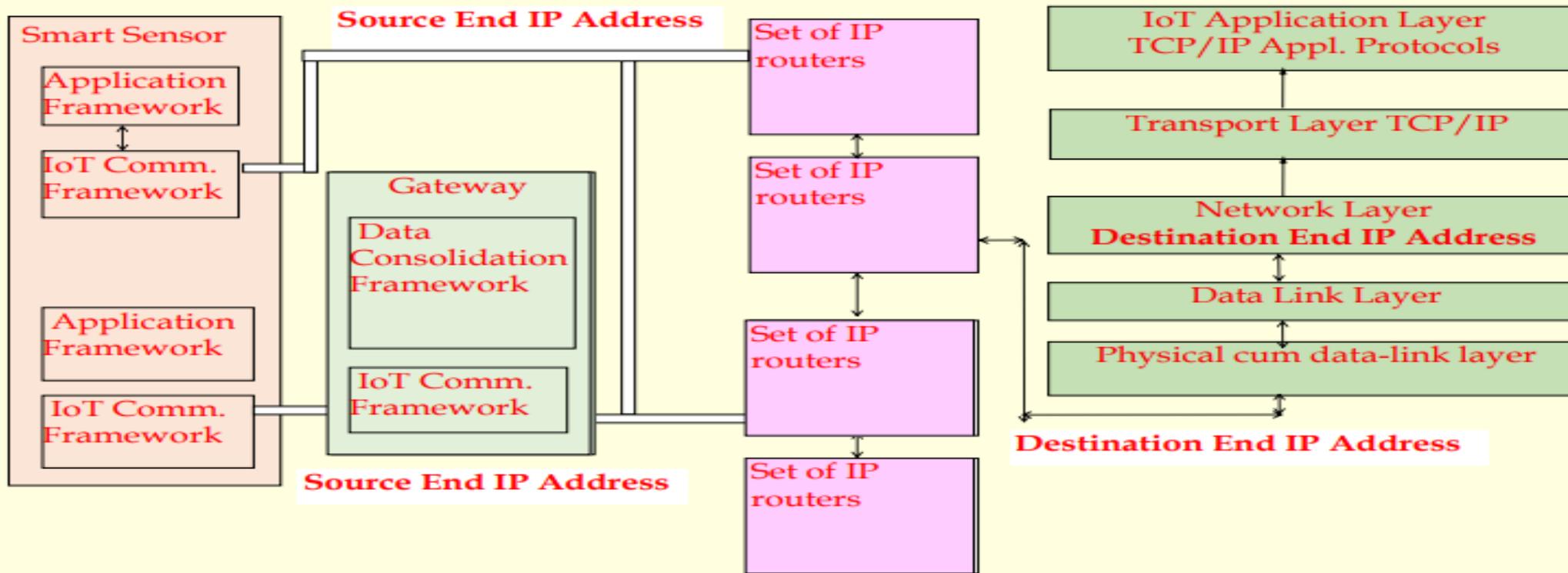
Framework

Fig. 4.1 Source end network layer connected through set of IP routers for data packets from an IP address and communicating with IoT/M2M IoT Apps and Services layer using TCP/IP suite of Application protocols

Source End IP Connectivity

- Use a source IP address

- Source end network layer connection through set of IP routers up to the destination IP address

- Smart Sensors IoT Communication framework and Application framework connect to a gateway

Source End IP Connectivity

- Source end network layer connection through set of IP routers up to the destination IP address

- The gateway has a data Consolidation/ enrichment/ transcoding Framework and IoT – IP communication framework

- The framework uses IP routers to destination which is identified by another IP address of destination
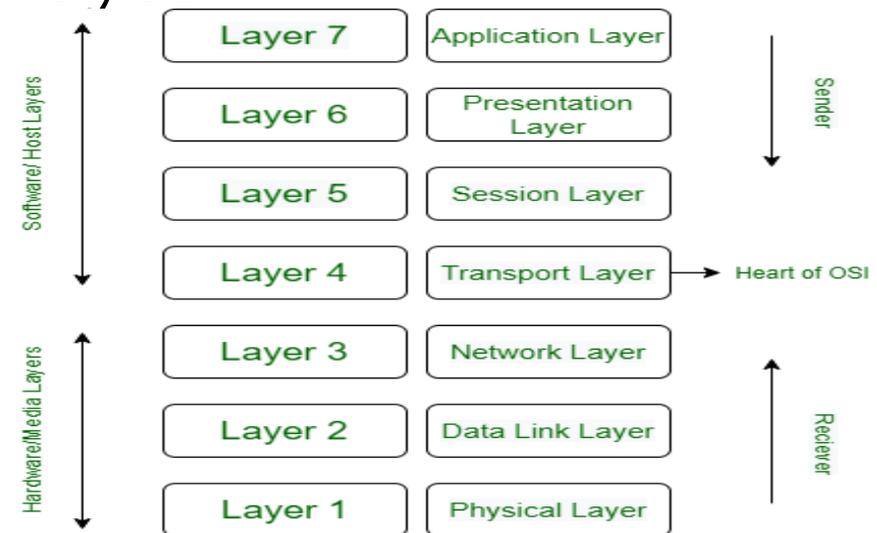
Internet Connectivity

- Internet connectivity is through a set of routers in a huge network of routers which carry data packets as per IP protocol from a source end to another and vice versa.

- A source sends data packets in IETF standardized formats to destination

- Each packet flows towards destination through set of router

Internet Communication

- Using layers between the Source Application layer and destination Application layer

- When data transmits from a layer i to next layer j the actions performed at each layer as per the protocol used for communication by that layer

	Layer 7	Application Layer
	Layer 6	Presentation Layer
Software/ Host Layers	Layer 5	Session Layer
	Layer 4	Transport Layer → Heart of OSI
Hardware/Media Layers	Layer 3	Network Layer
	Layer 2	Data Link Layer
	Layer 1	Physical Layer

Sender

Reciever

Internet Communication

- Layer will next specify the new parameters as per the protocol and creates new stack for next lower layer

- the process continues until data communicate over the network.

Social Networking

[sō-shəl 'net-.wər-kiŋ]

The practice of using social networks, such as Facebook or LinkedIn, to form connections and communicate with others online.
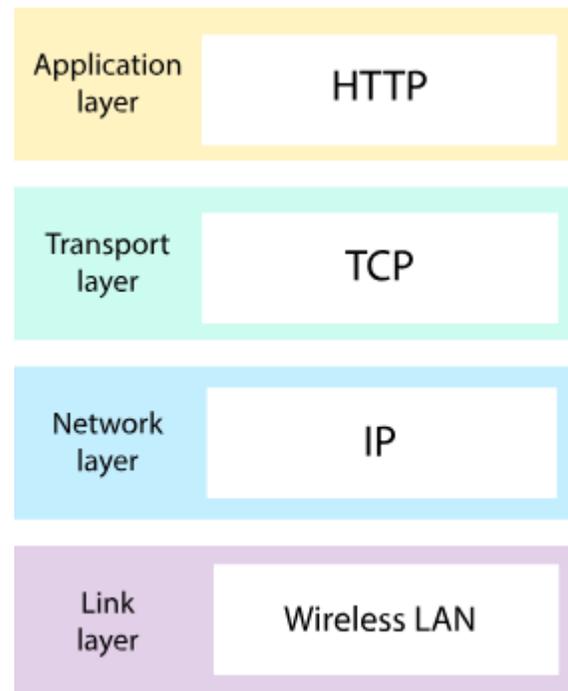
Investopedia

Upper Layers and Lower Layers

- Upper layers use the header words alone

- Lower layer, such as, data-link layer protocol, such as

 Ethernet use trailing bits also, in addition to the header words.

Application layer	HTTP
Transport layer	TCP
Network layer	IP
Link layer	Wireless LAN

Why organisations need to take responsibility for securing their telecommunications?"

The internet uses several standardized communication technologies called protocols. Every communication over the internet uses several protocols, each with a different function. The protocols that are most important in VoIP are IP, UDP and RTP.

Thank You