

41092 Network Fundamentals

Lecture 1

Chapter 1: Roadmap

- 1.1 What is the Internet?
- 1.2 Network edge (end systems, access network, links)
- 1.3 Network core (packet switching, circuit switching, network structure)
- 1.4 Delay, loss, throughput in a network
- 1.5 Protocol layers, service models
- 1.6 History

WHAT IS THE INTERNET?

Billions of connected computing devices

Hosts – end user systems

Running network apps

Communication links

- In fiber, fiber, copper, radio, satellite
- Transmission rate is called bandwidth

Packet switching

Forward packets (chunks of data)

- via routers and switches

INTERNET – is the network of networks

- Mobile networks
- Broad networks
- In addition networks
- In connected ISPs

All connected via the Access networks

Protocols – control sending, receiving of messages

E.g. TCP, IP, HTTP, SMTP

Internet Standards

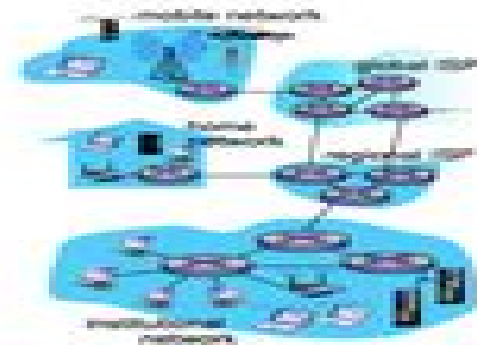
RFC: Request for comments

IETF: Internet Engineering Task Force

Protocol

They define format, order messages sent and received among network entities, and actions taken on message transmission, receipt

<p>Business protocols include:</p> <p>Mobile → + → 90</p> <p>What time is it? → + → 4:20 pm</p> <p>Specific messages are sent then specific actions taken when messages received, on other events</p>	<p>Network protocols machines rather than humans</p> <p>All communication activity is Internet governed by protocols</p>
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Lab Manual Network Fundamentals Answers

Julia Schneider



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