Harvard University
CSCI S-40, Communication Protocols and Internet Architectures
Reading Assignment for Lecture 8

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- In the course textbook Internetworking with TCP/IP Volume One - 6th Edition
  * Read sections on 19.8 through 19.16 on Network Address Translation (NAT)

- Read RFC 3022, Title: Traditional IP Network Address Translator, Pages 1 – 10
- RFC 5382, BCP 142, Pages 1 – 12, Title: Network Address Translation (NAT) Behavioral Requirements for TCP (Note, BCP means Best Current Practice)
- The RFC for STUN (RFC#5389) is being updated. Read pages 1 -13 of the current update:
  https://tools.ietf.org/html/draft-ietf-tram-stunbis-15

- This is an excellent article on the current state of NAT and its importance as networks transition to IPv6. This article is OPTIONAL, but I highly recommend it if you are working in the networking field.
  https://blog.apnic.net/2017/09/06/opinion-defence-nats/

- OPTIONAL Review RFC 2663, NAT Terminology and Considerations
- OPTIONAL Review RFC 6888 and 6264, both on Carrier-Grade NATs. It is important to understand the topology and architectural issues for CGNs, but not the implementation details.
- OPTIONAL Review RFC 6598, Shared Address Space Request
- OPTIONAL Review IETF BCP 127, Pages 1 – 14, (RFC 4787) Title: Network Address Translation (NAT) Behavioral Requirements for Unicast UDP (Note, BCP means Best Current Practice)

- OPTIONAL Reading: IEEE paper called Transmission Control Protocol (TCP) in Wireless Networks: Issues, Approaches, and Challenges", pages 64 through 68
  Authors: Ka-Cheong Leung and Victor O.K. Li,
  IEEE Communications Surveys and Tutorials,vol.8 no.4, 4th quarter 2006, pp.64–79
  This paper is available in Harvard Hollis and you have access to Hollis with your HUID.
- OPTIONAL Reading: The following article is not an "easy read" but it is a very worthwhile since it describes the type of subtle interoperability problems we can expect to see with the transition to IPv6. You can skim the details about SMTP that are discussed, but note that the root cause of the interoperability problem is related to the IPv6 address formats described in RFC 4291.
  http://www.potaroo.net/ispcol/2013-03/literals.html

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