

CSCI 476 Computer Security

Exercise for Chapter 6.

(1) The **coupon collector** problem is defined as the expected number of days that it takes to collect n (types of) coupons if one can receive one of these coupons at random every day.

How many days will be needed so that one can get all the n coupons?

(2) Suppose that an attacker wants to probe the 65535 ports with some TCP connection to a host. If he does that proactively he needs 65535 probes. Now if he randomly probes these ports so that nobody can detect him, how many probes does he need?