

# CSE 543 - Computer Security

Lecture 22 - Denial of Service

November 15, 2007

URL: <http://www.cse.psu.edu/~tjaeger/cse543-f07/>

# Denial of Service

- Intentional prevention of access to valued resource
  - CPU, memory, disk (system resources)
  - DNS, print queues, NIS (services)
  - Web server, database, media server (applications)
- This is an attack on *availability* (*fidelity*)
- **Note:** launching DOS attacks is easy
- **Note:** preventing DOS attacks is hard
  - Mitigation the path most frequently traveled

# SMURF Attacks

- This is one of the deadliest and simplest of the DOS attacks (called a *naturally amplified* attack)
- Send a large number PING packet networks on the broadcast IP addresses (e.g., 192.168.27.254)
- Set the source packet IP address to be your victim
- All hosts will reflexively respond to the ping at your victim
- ... and it will be crushed under the load.

