

## Day 86

### Topic: DoS & DDoS Attacks

**Objective:** To understand Denial of Service attacks and stress testing.

#### Theoretical Concepts:

We defined DoS (one attacker, one target) vs DDoS (Distributed attackers). We discussed Volume-based attacks (UDP floods), Protocol attacks (SYN floods), and Application Layer attacks (HTTP floods).

#### Practical Work:

We used **hping3** to simulate a SYN Flood attack on our lab test server. Command: *hping3 -S --flood -V -p 80 [Target IP]*. We observed the CPU usage on the target server spike to 100% and the web service become unresponsive. We also discussed mitigation strategies like rate limiting and Blackholing.

**Tools Used:** hping3, Metasploit.

**Outcome:** Understood the mechanics of flooding attacks and the impact on service availability.