

CSC 116 DDoS Attacks

Case study

Have you ever tried to visit a website, but it was extremely slow or completely down? It might have been under a DDoS attack.

Definition of DoS

A cyber attack that floods a website or server with fake traffic to make it unavailable.

Difference between **DoS** vs. **DDoS**:

- **DoS (Denial of Service)**: A single attacker floods a target with requests.
- **DDoS (Distributed Denial of Service)**: Multiple devices (botnets) are used to overwhelm the target.

DoS vs DDoS Attacks

INDUSFACE™



Single System

DoS Attack



Victim's Server



Multiple Systems

DDoS Attack



Victim's Server

Why Do Hackers Launch DDoS Attacks?

Solutions

Enable Rate Limiting & CAPTCHAs

- If you run a personal website (e.g., a school project), enable:
 - **Rate limiting** (limits the number of requests per IP).
 - **CAPTCHA verification** to block bots.
 - **Web Application Firewall (WAF)** (Cloudflare, AWS Shield, etc.).

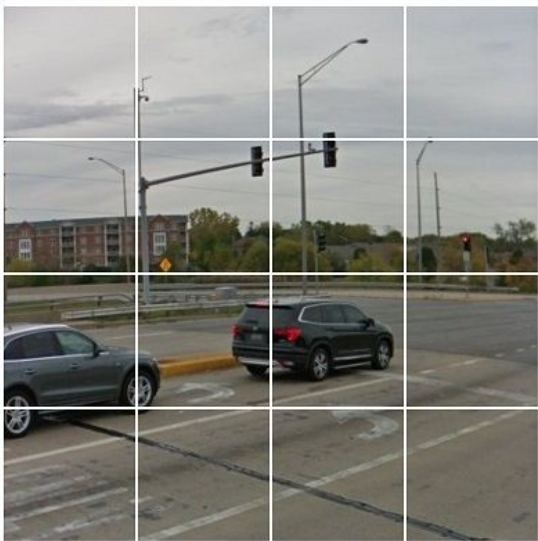
Monitor Traffic for Anomalies

- Use tools like **Google Analytics**, **AWStats**, or **UptimeRobot** to check for **sudden spikes in traffic**.
- If you notice **abnormal behavior**, temporarily **block suspicious IPs**.
-

Use Cloud-Based DDoS Protection

- Services like **Cloudflare Free Plan**, **Google Shield**, or **AWS Free Tier** offer basic **DDoS mitigation**.
- They provide **rate limiting**, **IP filtering**, and **traffic distribution**.

Select all squares with
traffic lights
If there are none, click skip



SKIP

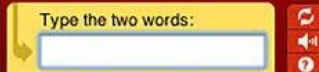
overlooks inquiry

Type the two words:

overlooks inquiry

Type the two words:

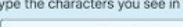
Type the two words:



stop spam.
read books.

Match the characters in the picture [Help](#)

To continue, type the characters you see in the picture. [Why?](#)



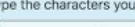
The picture contains 8 characters.

Characters:

[Continue](#)

Match the characters in the picture [Help](#)

To continue, type the characters you see in the picture. [Why?](#)



The picture contains 8 characters.

Characters:

[Continue](#)

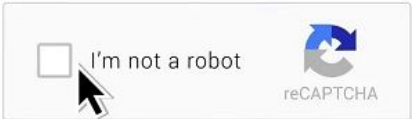
To continue, type the characters you see in the picture. [Why?](#)

$$\sqrt[6]{T_9} \sqrt[1]{BC} \sqrt[1]{D} \sqrt[1]{S}$$

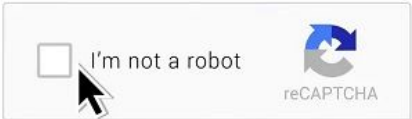
The picture contains 8 characters.

Characters:

Continue



A screenshot of the reCAPTCHA interface showing the 'I'm not a robot' checkbox. A mouse cursor is hovering over the checkbox, which is currently unchecked. The reCAPTCHA logo is visible on the right.





A screenshot of the reCAPTCHA interface showing the 'I'm not a robot' checkbox. A mouse cursor is hovering over the checkbox, which is currently unchecked. The reCAPTCHA logo is visible on the right.

Submit

Sample 1



Type the text:



42 2463435

Type the text:

[illegible]

Sample 2

49649868

1680

CHINESE IN AMERICA

Type the text:

|

🔄 🔊 ?

49649868



Type the text:

I



CSC 116 Malicious Mobile Apps

12 malicious malwares