Security incident report

Section 1: Identify the network protocol involved in the incident
The main network protocols involved are **DNS** and **HTTP**. DNS is used to find the IP address of a website, while HTTP is the protocol that loads the website in the browser. In this incident, the DNS request for "yummyrecipesforme.com" ended up loading a different website, "greatrecipesforme.com," due to malicious code that was inserted into the original site's JavaScript. This caused users to be redirected to a harmful website.

Section 2: Document the incident
We discovered that "yummyrecipesforme.com" had been hacked. The TCP dump showed that users trying to visit this site were redirected to "greatrecipesforme.com," where a malicious JavaScript code downloaded malware onto their computers. This happened because the site's code was changed without permission, likely due to weak security practices like poor password management or old employee accounts that hadn't been properly disabled. As a result, users were unknowingly exposed to malware, which could further harm their devices.

Section 3: Recommend one remediation for brute force attacks
• Implement Multi-Factor Authentication (MFA) to add extra layers of security. • Enforce strong password policies requiring complex and frequently updated passwords. • Ensure immediate access revocation when employees leave to prevent unauthorized access. • Apply separation of duties and least privilege principles to minimize access rights. • Deploy an Intrusion Detection System (IDS) to monitor for suspicious

activities.

- Regularly update and patch all software, especially web applications and plugins.
- Conduct security awareness training for employees to prevent phishing and social engineering attacks.
- Perform regular security audits and vulnerability assessments to identify and fix potential weaknesses in the system.

These measures will reinforce network and application security, reducing the risk of future incidents.

```
14:18:32.192571 IP your.machine.52444 > dns.google.domain: 35084+ A?
yummyrecipesforme.com. (24)
14:18:32.204388 IP dns.google.domain > your.machine.52444: 35084 1/0/0 A
203.0.113.22 (40)


14:18:36.786501 IP your.machine.36086 > yummyrecipesforme.com.http: Flags
[S], seq 2873951608, win 65495, options [mss 65495,sackOK,TS val 3302576859
ecr 0,nop,wscale 7], length 0
14:18:36.786517 IP yummyrecipesforme.com.http > your.machine.36086: Flags
[S.], seq 3984334959, ack 2873951609, win 65483, options [mss 65495,sackOK,TS
val 3302576859 ecr 3302576859,nop,wscale 7], length 0
14:18:36.786529 IP your.machine.36086 > yummyrecipesforme.com.http: Flags
[.], ack 1, win 512, options [nop,nop,TS val 3302576859 ecr 3302576859],
length 0
14:18:36.786589 IP your.machine.36086 > yummyrecipesforme.com.http: Flags
[P.], seq 1:74, ack 1, win 512, options [nop,nop,TS val 3302576859 ecr
3302576859], length 73: HTTP: GET / HTTP/1.1
14:18:36.786595 IP yummyrecipesforme.com.http > your.machine.36086: Flags
[.], ack 74, win 512, options [nop,nop,TS val 3302576859 ecr 3302576859],
length 0
...<a lot of traffic on the port 80>...


14:20:32.192571 IP your.machine.52444 > dns.google.domain: 21899+ A?
greatrecipesforme.com. (24)
14:20:32.204388 IP dns.google.domain > your.machine.52444: 21899 1/0/0 A
192.0.2.17 (40)

14:25:29.576493 IP your.machine.56378 > greatrecipesforme.com.http: Flags
[S], seq 1020702883, win 65495, options [mss 65495,sackOK,TS val 3302989649
ecr 0,nop,wscale 7], length 0
14:25:29.576510 IP greatrecipesforme.com.http > your.machine.56378: Flags
[S.], seq 1993648018, ack 1020702884, win 65483, options [mss 65495,sackOK,TS
val 3302989649 ecr 3302989649,nop,wscale 7], length 0
14:25:29.576524 IP your.machine.56378 > greatrecipesforme.com.http: Flags
[.], ack 1, win 512, options [nop,nop,TS val 3302989649 ecr 3302989649],
length 0
14:25:29.576590 IP your.machine.56378 > greatrecipesforme.com.http: Flags
[P.], seq 1:74, ack 1, win 512, options [nop,nop,TS val 3302989649 ecr
3302989649], length 73: HTTP: GET / HTTP/1.1
```

```
14:25:29.576597 IP greatrecipesforme.com.http > your.machine.56378: Flags
[.], ack 74, win 512, options [nop,nop,TS val 3302989649 ecr 3302989649],
length 0
…<a lot of traffic on the port 80>...
```