

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

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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>...
```

Security incident report

Section 1: Identify the network protocol involved in the incident

The Machine made a DNS request to access the website yummyrecipesforme.com which was responded to and an IP address was given. Once the machine accesses the website, the protocol HTTP was used during the TCP/IP three-way handshake which is when the malicious file was sent to the machine and introduced to the network.

Section 2: Document the incident

After the issue of the website prompting users to download a file to access the recipes was reported to the security team, they started their investigation. A Sandbox environment was created to observe the website and purposeful network traffic was sent from the sandbox to the website with the protocol network protocol analyzer. Once the connection is made, there is a prompt to download an executable file to update the browser (if possible a screenshot of the prompt would be inserted). To see what happens in the sandbox environment, the prompt is accepted and downloaded, resulting in a redirection to a different URL greatrecipesforme.com which contains malware. It is confirmed by the senior analyst that the website was compromised and the source code is checked. It is noticed that javascript code was added to prompt website visitors browsing to the original yummyrecipesforme.com to greatrecipesforme.com. It is concluded that the webserver was compromised via brute force attack, the malicious attacker was able to guess the website owner's admin password.

Section 3: Recommend one remediation for brute force attacks

One security measure that the team can implement would be a policy to disallow previous passwords to be used and that the default admin passwords cannot be used. Furthermore, the policy should address password complexity, frequency of password changes, and MFA or 2FA must be implemented.