

# Cybersecurity Incident Report:

## Network Traffic Analysis

```
13:24:32.192571 IP 192.51.100.15.52444 > 203.0.113.2.domain: 35084+ A?  
yummyrecipesforme.com. (24)
```

```
13:24:36.098564 IP 203.0.113.2 > 192.51.100.15: ICMP 203.0.113.2  
udp port 53 unreachable length 254
```

```
13:26:32.192571 IP 192.51.100.15.52444 > 203.0.113.2.domain: 35084+ A?  
yummyrecipesforme.com. (24)
```

```
13:27:15.934126 IP 203.0.113.2 > 192.51.100.15: ICMP 203.0.113.2  
udp port 53 unreachable length 320
```

```
13:28:32.192571 IP 192.51.100.15.52444 > 203.0.113.2.domain: 35084+ A?  
yummyrecipesforme.com. (24)
```

```
13:28:50.022967 IP 203.0.113.2 > 192.51.100.15: ICMP 203.0.113.2  
udp port 53 unreachable length 150
```

Part 1: Provide a summary of the problem found in the DNS and ICMP traffic log.

As part of the DNS protocol, the UDP protocol was used to contact the DNS server to retrieve the IP address for the domain name of yummyrecipesforme.com. The ICMP protocol was used to respond with an error message, indicating issues contacting the DNS server. The UDP message going from your browser to the DNS server is shown in the first two lines of every log event. The ICMP error response from the DNS server to your browser is displayed in the third and fourth lines of every log event with the error message, "udp port 53 unreachable." Since port 53 is associated with DNS protocol traffic, we know this is an issue with the DNS server. Issues with performing the DNS protocol are further evident because the plus sign after the query identification number 35084 indicates flags with the UDP message and the "A?" symbol indicates flags with performing DNS protocol operations. Due to the ICMP error response message about port 53, it is highly likely that the DNS server is not responding. This assumption is further supported by the flags associated with the outgoing UDP message and domain name retrieval.

**Part 2: Explain your analysis of the data and provide at least one cause of the incident.**

The incident was first reported at 1:24 PM. Several customers complained that they were not able to access the website [www.yummyrecipesforme.com](http://www.yummyrecipesforme.com), and saw the error "destination port unreachable" after waiting for the page to load. To investigate the incident an attempt was made to visit the website multiple times and the network analyzer tcp dump was used to capture the logs to further examine the issue. It was found that the error message "udp port 53 unreachable" was returned. Port 53 is commonly used for DNS; so this error could be caused by a misconfiguration of the firewall or due to a DoS attack.