# **Task Report 2**

02/03/2023

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## 1.Perform IP Address Spoofing.

Internet Protocol (IP) spoofing is a type of malicious attack in which the threat actor conceals the true source of IP packets in order to make it difficult to determine where they originated. The attacker generates packets by changing the source IP address in order to impersonate another computer system, conceal the sender's identity, or both. The header field for the source IP address in the spoofed packet contains an address that differs from the actual source IP address.

Attackers frequently use IP spoofing to launch distributed denial of service (DDoS) and man-in-the-middle attacks against targeted devices or surrounding infrastructures. DDoS attacks seek to overwhelm a target with traffic while concealing the identity of the malicious source, thereby preventing mitigation efforts.

Attackers can use spoofed IP addresses to prevent authorities from discovering who they are and implicating them in the attack; prevent targeted devices from sending alerts about attacks in which they are unwitting participants; and circumvent security scripts, devices, and services that blocklist IP addresses known to be sources of malicious traffic.

Command: ifconfig eth0 <IP Address>

```
)-[/home/kali]
   ifconfig eth0 192.168.115.14
            li)-[/home/kali]
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
        inet 192.168.115.14 netmask 255.255.255.0 broadcast 192.168.115.255
        inet6 fe80::c82:20e8:6b33:b63f prefixlen 64 scopeid 0×20<link>
        ether 5a:61:d9:2a:a7:cf txqueuelen 1000 (Ethernet)
       RX packets 8923 bytes 7434611 (7.0 MiB)
       RX errors 0 dropped 0 overruns 0 frame 0 TX packets 6502 bytes 1016742 (992.9 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
        inet 127.0.0.1 netmask 255.0.0.0
        inet6 :: 1 prefixlen 128 scopeid 0×10<host>
        loop txqueuelen 1000 (Local Loopback)
        RX packets 6 bytes 340 (340.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 6 bytes 340 (340.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
          kali)-[/home/kali]
   echo Darshan Achar
Darshan Achar
```

## 2.Perform Mac Address Spoofing.

MAC spoofing is most commonly associated with the attack method used in Wireless Network Hacking. MAC spoofing is a popular technique for breaking into wireless networks and stealing wireless network credentials. It can also be used to install an unauthorised access point or simulate an access point with a packet sniffer from the same operating system and network segment.

#### Commands:

- ifconfig eth0 down
- macchanger -r eth0
- macchanger -s eth0
- macchanger -m <Mac which you to set> eth0
- ifconfig eth0 up

```
Current MAC: 00:0c:29:b0:85:64 (VMware, Inc.)
Permanent MAC: 00:0c:29:b0:85:64 (VMware, Inc.)
     oot®kali)-[/home/kali]
 -# ifconfig eth0 down
   (root@kali)-[/home/kali]
  umacchanger -r eth0
Current MAC: 00:0c:29:b0:85:64 (VMware, Inc.)
Permanent MAC: 00:0c:29:b0:85:64 (VMware, Inc.)
New MAC:
              76:e5:58:21:0b:96 (unknown)
  -(root®kali)-[/home/kali]
 -# ifconfig eth0 down
    <mark>root®kali</mark>)-[/home/kali]
  macchanger -s eth0
Current MAC: 76:e5:58:21:0b:96 (unknown)
Permanent MAC: 00:0c:29:b0:85:64 (VMware, Inc.)
          kali)-[/home/kali]
    macchanger -m 00:0c:29:b0:85:64 eth0
Current MAC: 76:e5:58:21:0b:96 (unknown)
Permanent MAC: 00:0c:29:b0:85:64 (VMware, Inc.)
               00:0c:29:b0:85:64 (VMware, Inc.)
New MAC:
     <mark>pot®kali</mark>)-[/home/kali]
   echo Darshan Achar
Darshan Achar
```

## 3. Whatweb Commands.

Whatweb is a website identification service. It recognises web technologies such as CMS, blogging platforms, JavaScript libraries, and embedded devices. Whatweb has over 900 plugins, each of which recognises a different thing. It also identifies version numbers, email address, account id and more.

#### Command:

- whatweb mitkundapura.com
- whatweb -v mitkundapura.com
- whatweb -a 3 mitkundapura.com
- whatweb --max-redirect 2 mitkundapura.com
- whatweb -v -a 3 mitkundapura.com

```
The solution althoridays are most presently (controlled to the controlled to the con
```

```
ry ]
A fast, concise, JavaScript that simplifies how to traverse
HTML documents, handle events, perform animations, and add
AJAX.
       LiteSpeed web server, which is able to read Apache
configuration directly and used together with web hosting
control panels by replacing Apache
    whatweb mitkundapura.com -v
atweb report for http://mitkundap
atus : 301 Moved Permanently
ale : ,301 Moved Permanently
         : 301 Moved Perm
: ,301 Moved Perm
: 217.21.87.244
y : UNITED KINGBON
  ountry
    mmary : HTMLS, HTTPServer[LiteSpeed], LiteSpeed, RedirectLocation[https://mitkundapura.com/], UncommonHeaders[platform,content-security-policy]
 Detected Plugins:
[ HTML$ ]
HTML version 5, detected by the doctype declaration
  HTTPServer |
HTTP server header string. This plugin also attempts to
identify the operating system from the server header.
  LiteSpeed |
LiteSpeed web server, which is able to read Apache
configuration directly and used together with web hosting
control panels by replacing Apache
  Redirectlocation ]
HTTP Server string location. used with http-status 301 and 302
                         : https://mitkundapura.com/ (from location)
          monHeaders ]
Uncommon HTTP server headers. The blacklist includes all
the standard headers and many non standard but common ones
WhatWeb report for https://mitkundapura.com/
Status
Title
                  : 200 OK
: MITK- Moodlaka
: 217.21.87.244
                                         dlakatte Institute of Technology & Management, Kundapura Home
Summary : Bootstrap, Email[office@mitkundapura.com], HTML5, HTTPServer[LiteSpeed], JQuery, LiteSpeed,
Detected Plugins:
[ Bootstrap ]
Bootstrap is an open source toolkit for developing with
                                   : https://getbootstrap.com/
               Website
[ Email ]
Extract email addresses. Find valid email address and
               syntactically invalid email addresses from mailto: link tags. We match syntactically invalid links containing mailto: to catch anti-spam email addresses, eg. bob at gmail.com. This uses the simplified email regular expression from
               http://www.regular-expressions.info/email.html for valid email address matching.
[ HTML5 ]
               HTML version 5, detected by the doctype declaration
[ HTTPServer ]
HTTP server header string. This plugin also attempts to identify the operating system from the server header.
                                       : LiteSpeed (from server string)
```

## 4.NsLookUp Commands.

Nslookup (name server lookup) is a useful command for retrieving information from a DNS server. It is a network administration tool that queries the DNS to obtain domain name or IP address mapping information, as well as any other specific DNS record. It is also used to troubleshoot DNS issues.

#### Commands:

1.nslookup followed by the domain name will display the "A Record" (IP address) of the domain.

## # nslookup google.com

2.SOA record provides the authoritative information about the domain, e-mail, the serial numbers etc...

## # nslookup -type==soa google.com

3.NS (name server) it will output the name serves which are associated with given domains.

## # nslookup -type=ns google.com

4.MX (mail exchange) record maps a domain name to list of mail exchange servers for that domain.

## # nslookup -type=mx google.com

5.To view information useful for debugging, use the debug option

# nslookup -debug google.com

```
[sudo] password for kali:
   (root⊗kali)-[/home/kali]
nslookup -debug mitkundapura.com
                  192.168.65.2
192.168.65.2#53
Address:
    OUESTIONS:
        mitkundapura.com, type = A, class = IN
        mitkundapura.com
         internet address = 217.21.87.244
    ttl = 5
AUTHORITY RECORDS:
ADDITIONAL RECORDS:
Non-authoritative answer:
Name: mitkundapura.com
Address: 217.21.87.244
    QUESTIONS:
         mitkundapura.com, type = AAAA, class = IN
    ANSWERS:
        mitkundapura.com
         has AAAA address 2a02:4780:11:771:0:2d4c:6d7f:1
    ttl = 5
AUTHORITY RECORDS:
    ADDITIONAL RECORDS:
Name: mitkundapura.com
Address: 2a02:4780:11:771:0:2d4c:6d7f:1
               Li)-[/home/kali]
    echo Darshan Achar
Darshan Achar
```

```
root@kali)-[/home/kali]
nslookup google.com
/er: 192.168.19.2
/ess: 192.168.19.2#53
 Non-authoritative answer:
Name: google.com
Address: 142.250.183.238
Name: google.com
Address: 2404:6800:4007:822::200e
            (root@kwli)-[/home/kali]
nslookup -type-mx google.com
ver: 192.168.19.2
ress: 192.168.19.2#53
 Non-authoritative answer:
google.com mail exchanger = 10 smtp.google.com.
Authoritative answers can be found from:
smtp.google.com internet address = 142.251.10.26
smtp.google.com internet address = 142.251.12.27
smtp.google.com internet address = 142.251.12.26
smtp.google.com internet address = 172.217.194.27
smtp.google.com internet address = 172.217.194.26
smtp.google.com has AAAA address 2404:6800:4003:c0f::1a
smtp.google.com has AAAA address 2404:6800:4003:c11::1b
smtp.google.com has AAAA address 2404:6800:4003:c11::1a
smtp.google.com has AAAA address 2404:6800:4003:c11::1a
            (root@kali)-[/home/kali]
nslookup -type=soa google.com
                                                     192.168.19.2
192.168.19.2#53
  Server:
  Address:
  Non-authoritative answer:
  google.com
                          origin = ns1.google.com
mail addr = dns-admin.google.com
serial = 513187717
refresh = 900
retry = 900
expire = 1800
Authoritative answers can be found from:
            (root@ keli)-[/home/kali]
nslookup -type-mx google.com
ver: 192.168.19.2
ress: 192.168.19.2#53
 Server:
Address:
 Non-authoritative answer:
google.com mail exchanger = 10 smtp.google.com.
Authoritative answers can be found from:
smtp.google.com internet address = 142.251.10.26
smtp.google.com internet address = 142.251.12.27
smtp.google.com internet address = 142.251.12.26
smtp.google.com internet address = 172.217.194.27
smtp.google.com internet address = 172.217.194.26
smtp.google.com has AAAA address 2404:6800:4003:c0f::1a
smtp.google.com has AAAA address 2404:6800:4003:c11::1b
smtp.google.com has AAAA address 2404:6800:4003:c11::1a
smtp.google.com has AAAA address 2404:6800:4003:c04::1a
```

## 6. Whols Command.

The whois command displays information about a website's record. You may get all the information about a website regarding its registration and owner's information.

Command: # whois mitkundapura.com

```
)-[/home/kali]
   whois mitkundapura.com
  Domain Name: MITKUNDAPURA.COM
  Registry Domain ID: 1656001143_DOMAIN_COM-VRSN
  Registrar WHOIS Server: whois.registrar.eu
  Registrar URL: http://www.openprovider.com
  Updated Date: 2022-02-22T08:46:34Z
  Creation Date: 2011-05-13T20:28:43Z
  Registry Expiry Date: 2023-05-13T20:28:43Z
  Registrar: Hosting Concepts B.V. d/b/a Registrar.eu
  Registrar IANA ID: 1647
  Registrar Abuse Contact Email: abuse@registrar.eu
  Registrar Abuse Contact Phone: +31.104482297
  Domain Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited
  Name Server: NS1.DNS-PARKING.COM
  Name Server: NS2.DNS-PARKING.COM
  DNSSEC: unsigned
  URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wicf/
>>> Last update of whois database: 2023-03-03T09:03:28Z <<<
For more information on Whois status codes, please visit https://icann.org/epp
NOTICE: The expiration date displayed in this record is the date the
registrar's sponsorship of the domain name registration in the registry is
currently set to expire. This date does not necessarily reflect the expiration
date of the domain name registrant's agreement with the sponsoring
registrar. Users may consult the sponsoring registrar's Whois database to view the registrar's reported date of expiration for this registration.
TERMS OF USE: You are not authorized to access or query our Whois
database through the use of electronic processes that are high-volume and
automated except as reasonably necessary to register domain names or
modify existing registrations; the Data in VeriSign Global Registry
Services' ("VeriSign") Whois database is provided by VeriSign for
information purposes only, and to assist persons in obtaining information
about or related to a domain name registration record. VeriSign does not
guarantee its accuracy. By submitting a Whois query, you agree to abide
```

## 7.Nikto.

Nikto is an open-source command-line vulnerability scanner that looks for potentially dangerous files, outdated versions, server configuration files, and other issues on web servers. It is a well-known, simple-to-use, and extremely powerful pen testing tool.

command: nikto -h mitkundapura

```
(kali@kali)-[~]
$ nikto -h mitkundapura.com
- Nikto v2.1.6

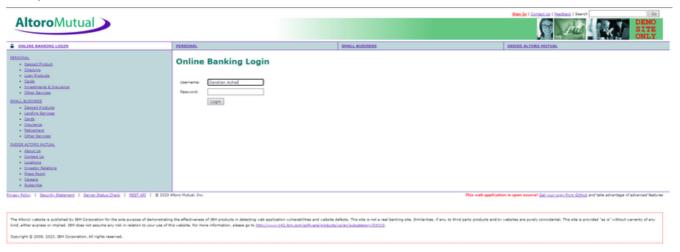
+ Target IP: 217.21.87.244
+ Target Hostname: mitkundapura.com
+ Target Port: 80
+ Start Time: 2023-03-02 23:46:11 (GMT-5)

+ Server: LiteSpeed
- The anti-click/acking X-Frame-Options header is not present.
+ The X-SS-Protection header is not defined. This header can hint to the user agent to protect against some forms of XSS
+ Uncommon header 'platform' found, with contents: hostinger
+ The X-Content-Type-Options header is not set. This could allow the user agent to render the content of the site in a different fashion to the MIME type
+ Root page / redirects to: https://mitkundapura.com/
+ No CGI Directories found (use '-C all' to force check all possible dirs)
+ Server may leak inodes via ETags, header found with file /images, inode: 999, size: 61cb51cf, mtime: 7630b837fa8dd3cc;;;
+ ERROR: Error limit (20) reached for host, giving up. Last error: error reading HTTP response
+ Scan terminated: 20 error(s) and 5 item(s) reported on remote host
+ End Time: 2023-03-02 23:46:47 (GMT-5) (36 seconds)
```

## 8. Crypto Configuration Flaw.

A cryptographic failure is a critical web application security flaw that exposes sensitive application data due to a faulty or non-existent cryptographic algorithm. Passwords, patient health records, business secrets, credit card information, email addresses, and other personal user information are examples.

#### Output:



## 9.NetDiscover.

Netdiscover is a simple ARP scanner that can be used to search a network for live hosts. It can also search for multiple subnets. It simply displays the output in real time (ncurse). This can be used in the early stages of a pentest where you have network access. Netdiscover is a simple initial reconnaissance tool that can be very useful.

Command: To view the usage options.

# netdiscover -h

·use following command to check the IP Address:

# ifconfig

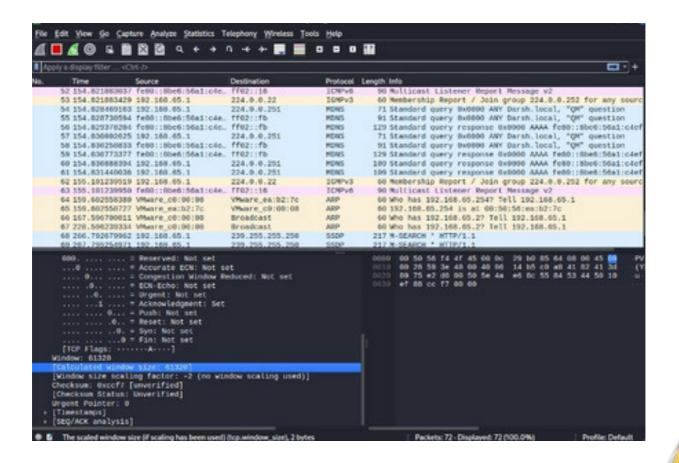
· We can scan a specific range with -r option

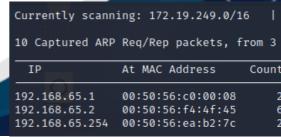
# netdiscover -r 192.168.19.0/24

Currently scanning: 172.19.249.0/16 | Screen View: Unique Hosts 10 Captured ARP Req/Rep packets, from 3 hosts. Total size: 600 At MAC Address Count Len MAC Vendor / Hostname 192.168.65.1 00:50:56:c0:00:08 2 120 VMware, Inc. 192.168.65.2 00:50:56:f4:4f:45 6 360 VMware, Inc. 192.168.65.254 00:50:56:ea:b2:7c 2 120 VMware, Inc. zsh: suspended sudo netdiscover -d -i eth0 —(kali⊕kali)-[~] -\$ echo Darshan Achar Darshan Achar File Actions Edit View Help Currently scanning: (passive) | Screen View: Unique Hosts 3 Captured ARP Req/Rep packets, from 1 hosts. Total size: 180 IP At MAC Address Count Len MAC Vendor / Hostname 192.168.65.2 00:50:56:f4:4f:45 3 180 VMware, Inc. zsh: suspended sudo netdiscover -p -(kali⊛kali)-[~] \$ echo Darshan Achar Darshan Achar Currently scanning: 192.168.173.0/16 | Screen View: Unique Hosts 3 Captured ARP Req/Rep packets, from 3 hosts. Total size: 180 IP At MAC Address Count Len MAC Vendor / Hostname 192.168.65.1 00:50:56:c0:00:08 1 192.168.65.2 00:50:56:f4:4f:45 1 192.168.65.254 00:50:56:ea:b2:7c 1 60 VMware, Inc. 60 VMware, Inc. 60 VMware, Inc. zsh: suspended sudo netdiscover -i eth0 —(kali⊛kali)-[~] \$ echo Darshan Achar Darshan Achar Currently scanning: Finished! | Screen View: Unique Hosts 2 Captured ARP Req/Rep packets, from 1 hosts. Total size: 120 At MAC Address Count Len MAC Vendor / Hostname 192.168.65.2 00:50:56:f4:4f:45 2 120 VMware, Inc. zsh:|suspended sudo netdiscover -r 192.168.1.0/24 —(kali⊛kali)-[~] —\$ echo Darshan Achar Darshan Achar

## 9. Finding Data Packets using Wireshark.

Wireshark is a network protocol analyzer, or an application that captures packets from a network connection, such as from your computer to your home office or the internet. Packet is the name given to a discrete unit of data in a typical Ethernet network. Wireshark is the most often-used packet sniffer in the world.





# 10. Finding XML pages in website using Dirbuster.

Dirbuster is used once you have scanned an IP address and found any vulnerabilities. DirBuster will help you map out the application. Building a directory of the target site is useful in finding as many potential points of entry to the target. Output:

