- Web search engines and sites (e.g., Google, Netcraft, and LinkedIn)
- WHOIS registries
- Accessible DNS servers

The majority of this probing is indirect, sending traffic to websites including Google, and public WHOIS and DNS servers. Two tactics involve sending traffic to the target network, however, as follows:

- Probing the target's own DNS servers
- Network probing via SMTP

## **Network Scanning**

- Use of Nmap to perform initial network scanning
- Low-level assessment to understand the network configuration
- Use of Nmap and Metasploit to perform light vulnerability scanning
- Bulk vulnerability scanning (using Nessus, Qualys, and others)
- Evasion of intrusion detection and prevention mechanisms

```
(khanuh® kali)-[~]
$ nmap -PEPM -SP -vv -n 54.172.205.226
Warning: The -sP option is deprecated. Please use -sn
Warning: You are not root -- using TCP pingscan rather than ICMP
Starting Nmap 7.91 ( https://nmap.org ) at 2021-05-27 15:27 EDT
Initiating Ping Scan at 15:27
Scanning 54.172.205.226 [1 port]
Completed Ping Scan at 15:27, 0.03s elapsed (1 total hosts)
Nmap scan report for 54.172.205.226
Host is up, received syn-ack (0.033s latency).
Read data files from: /usr/bin/../share/nmap
Nmap done: 1 IP address (1 host up) scanned in 0.07 seconds
```

```
💀 kali)-[/home/khanuh]
 _# nmap -Pn -sU -open -F -vvv -n 54.172.205.226
Host discovery disabled (-Pn). All addresses will be marked 'up' and scan tim
es will be slower.
Starting Nmap 7.91 ( https://nmap.org ) at 2021-05-27 15:35 EDT
Initiating UDP Scan at 15:35
Scanning 54.172.205.226 [100 ports]
Completed UDP Scan at 15:36, 21.36s elapsed (100 total ports)
Nmap scan report for 54.172.205.226
Host is up, received user-set.
Scanned at 2021-05-27 15:35:39 EDT for 21s
PORT
          STATE
                        SERVICE
                                         REASON
7/udp
          open|filtered echo
                                         no-response
9/udp
          open|filtered discard
                                         no-response
          open filtered gotd
17/udp
                                         no-response
          open filtered chargen
19/udp
                                         no-response
49/udp
          open|filtered tacacs
                                         no-response
53/udp
          open|filtered domain
                                         no-response
          open filtered dhcps
67/udp
                                         no-response
68/udp
          open|filtered dhcpc
                                         no-response
69/udp
          open|filtered tftp
                                         no-response
80/udp
          open filtered http
                                         no-response
          open filtered kerberos-sec
88/udp
                                         no-response
111/udp
          open filtered rpcbind
                                         no-response
          open|filtered cfdptkt
120/udp
                                         no-response
          open|filtered ntp
123/udp
                                         no-response
          open|filtered msrpc
135/udp
                                         no-response
136/udp
          open|filtered profile
                                         no-response
137/udp
          open|filtered netbios-ns
                                         no-response
138/udp
          open filtered netbios-dgm
                                         no-response
139/udp
          open filtered netbios-ssn
                                         no-response
          open|filtered pcmail-srv
158/udp
                                         no-response
161/udp
          open|filtered snmp
                                         no-response
162/udp
          open|filtered snmptrap
                                         no-response
          open|filtered xdmcp
177/udp
                                         no-response
427/udp
          open filtered syrloc
                                         no-response
443/udp
          open|filtered https
                                         no-response
445/udp
          open filtered microsoft-ds
                                         no-response
497/udp
          open|filtered retrospect
                                         no-response
500/udp
          open|filtered isakmp
                                         no-response
514/udp
          open|filtered syslog
                                         no-response
515/udp
          open|filtered printer
                                         no-response
518/udp
          open|filtered ntalk
                                         no-response
520/udp
          open|filtered route
                                         no-response
593/udp
          open|filtered http-rpc-epmap
                                         no-response
623/udp
          open|filtered asf-rmcp
                                         no-response
          open filtered serialnumberd
626/udp
                                         no-response
631/udp
          open|filtered ipp
                                         no-response
996/udp
          open|filtered vsinet
                                         no-response
          open|filtered maitrd
997/udp
                                         no-response
998/udp
          open|filtered puparp
                                         no-response
999/udp
          open|filtered applix
                                         no-response
```

```
open|filtered exp2
1022/udp
                                        no-response
1023/udp
          open|filtered unknown
                                        no-response
1025/udp
          open|filtered blackiack
                                        no-response
1026/udp open filtered win-rpc
                                        no-response
1027/udp open filtered unknown
                                        no-response
1028/udp open filtered ms-lsa
                                        no-response
1029/udp
         open|filtered solid-mux
                                        no-response
          open filtered iad1
1030/udp
                                        no-response
1433/udp
         open filtered ms-sql-s
                                        no-response
1434/udp
          open filtered ms-sql-m
                                        no-response
1645/udp
          open|filtered radius
                                        no-response
          open filtered radacct
1646/udp
                                        no-response
1701/udp
         open filtered L2TP
                                        no-response
         open filtered h225gatedisc
1718/udp
                                        no-response
          open filtered h323gatestat
1719/udp
                                        no-response
1812/udp
          open|filtered radius
                                        no-response
1813/udp
          open|filtered radacct
                                        no-response
1900/udp
          open|filtered upnp
                                        no-response
          open filtered cisco-sccp
2000/udp
                                        no-response
2048/udp
         open|filtered dls-monitor
                                        no-response
2049/udp
         open filtered nfs
                                        no-response
2222/udp
         open|filtered msantipiracy
                                        no-response
         open|filtered rockwell-csp2
2223/udp
                                        no-response
3283/udp open filtered netassistant
                                        no-response
3456/udp
        open|filtered IISrpc-or-vat
                                        no-response
3703/udp open filtered adobeserver-3
                                        no-response
4444/udp
         open|filtered krb524
                                        no-response
4500/udp open|filtered nat-t-ike
                                        no-response
5000/udp open filtered upnp
                                        no-response
5060/udp open filtered sip
                                        no-response
5353/udp open filtered zeroconf
                                        no-response
5632/udp
          open filtered pcanywherestat
                                        no-response
9200/udp open|filtered wap-wsp
                                        no-response
10000/udp open filtered ndmp
                                        no-response
17185/udp open filtered wdbrpc
                                        no-response
20031/udp open|filtered bakbonenetvault no-response
30718/udp open filtered unknown
                                        no-response
31337/udp open filtered BackOrifice
                                        no-response
32768/udp open filtered omad
                                        no-response
32769/udp open|filtered filenet-rpc
                                        no-response
32771/udp open filtered sometimes-rpc6
                                        no-response
32815/udp open|filtered unknown
                                        no-response
33281/udp open filtered unknown
                                        no-response
49152/udp open filtered unknown
                                        no-response
49153/udp open filtered unknown
                                        no-response
49154/udp open|filtered unknown
                                        no-response
49156/udp open filtered unknown
                                        no-response
49181/udp open filtered unknown
                                        no-response
49182/udp open filtered unknown
                                        no-response
49185/udp open filtered unknown
                                        no-response
49186/udp open|filtered unknown
                                        no-response
```

```
49188/udp open|filtered unknown
                                        no-response
49190/udp open filtered unknown
                                        no-response
49191/udp open filtered unknown
                                        no-response
49192/udp open filtered unknown
                                        no-response
49193/udp open filtered unknown
                                        no-response
49194/udp open|filtered unknown
                                        no-response
49200/udp open filtered unknown
                                        no-response
49201/udp open filtered unknown
                                        no-response
65024/udp open|filtered unknown
                                        no-response
Read data files from: /usr/bin/../share/nmap
Nmap done: 1 IP address (1 host up) scanned in 21.51 seconds
           Raw packets sent: 200 (11.234KB) | Rcvd: 0 (0B)
  -(root® kali)-[/home/khanuh]
```

```
(root © keli)-[/home/khanuh]

# hping3 -c 5 -S -p 80 54.172.205.226

HPING 54.172.205.226 (eth0 54.172.205.226): S set, 40 headers + 0 data bytes

len=46 ip=54.172.205.226 ttl=64 id=40665 sport=80 flags=SA seq=0 win=65535 rtt=33.4 ms

len=46 ip=54.172.205.226 ttl=64 id=40666 sport=80 flags=SA seq=1 win=65535 rtt=34.3 ms

len=46 ip=54.172.205.226 ttl=64 id=40667 sport=80 flags=SA seq=2 win=65535 rtt=34.7 ms

len=46 ip=54.172.205.226 ttl=64 id=40668 sport=80 flags=SA seq=3 win=65535 rtt=34.1 ms

len=46 ip=54.172.205.226 ttl=64 id=40669 sport=80 flags=SA seq=4 win=65535 rtt=37.0 ms

--- 54.172.205.226 hping statistic ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 33.4/34.7/37.0 ms
```

## Web Search

- Physical addresses of office locations
- Contact details, including email addresses and telephone numbers
- Details of internal email systems and routing
- DNS layout and naming conventions
- Files residing on publicly accessible servers



"http://nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com/" mail tel X Q

Q All Shopping Videos News More Settings Tools

About 8 results (0.93 seconds)

No results found for "http://nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com/" mail tel fax.

Results for http://nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com/ mail tel fax (without quotes):

## It looks like there aren't many great matches for your search

**Tip:** Try using words that might appear on the page you're looking for. For example, "cake recipes" instead of "how to make a cake."

Need help? Check out other tips for searching on Google.

https://docs.aws.amazon.com > elasticbeanstalk > latest

## Managing Elastic Beanstalk user policies - AWS Documentation

Use AWS **Elastic Beanstalk** managed user policies to assign full access or ... End-to-end encryption · TCP Passthrough · Store keys securely · **HTTP** to HTTPS redirection ... "arn:aws:**elasticbeanstalk:us-east-**2:123456789012:**environment**/My First ... and other resources within **one** specific **Elastic Beanstalk** application. Missing: nismgrp1- 3pppnu5j. mail tel

```
-(root@kali)-[/home/khanuh]
telnet 54.172.205.226 80
Trying 54.172.205.226 ...
Connected to 54.172.205.226.
Escape character is '^]'.
quit
HTTP/1.1 400 Bad Request
Server: awselb/2.0
Date: Thu, 27 May 2021 19:51:37 GMT
Content-Type: text/html
Content-Length: 122
Connection: close
<html>
<head><title>400 Bad Request</title></head>
<center><h1>400 Bad Request</h1></center>
</body>
</html>
Connection closed by foreign host.
```

```
)-[/home/khanuh]
        0
                   nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com
Last-modified header missing -- time-stamps turned off. 2021-05-27 16:04:29 URL:http://nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com/ [2503] → "nismgrp1-env.eba-3pppnu5j.us-east-1.elast
icbeanstalk.com/index.html" [1]
http://nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com/robots.txt:
2021-05-27 16:04:29 ERROR 404: Not Found.
2021-05-27 16:04:29 URL:http://nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com/styles.css [3490/3490] → "nismgrp1-env.eba-3pppnu5j.
us-east-1.elasticbeanstalk.com/styles.css" [1]
2021-05-27 16:04:29 URL:http://niśmgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com/logo_aws_reduced.gif [189/189] → "nismgrp1-env.eba-3
pppnu5j.us-east-1.elasticbeanstalk.com/logo_aws_reduced.gif" [1]
FINISHED --2021-05-27 16:04:29-
Total wall clock time: 0.2s
Downloaded: 3 files, 6.0K in 0s (252 MB/s)
        🐯 <mark>kali</mark>)-[/home/khanuh]
    П
```

```
®
             )-[/home/khanuh/nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com]
   whois elasticbeanstalk.com
  Domain Name: ELASTICBEANSTALK.COM
  Registry Domain ID: 1633430775_DOMAIN_COM-VRSN
  Registrar WHOIS Server: whois.markmonitor.com
  Registrar URL: http://www.markmonitor.com
  Updated Date: 2019-05-07T23:07:14Z
  Creation Date: 2011-01-04T23:11:58Z
  Registry Expiry Date: 2024-01-04T23:11:58Z
  Registrar: MarkMonitor Inc.
  Registrar IANA ID: 292
  Registrar Abuse Contact Email: abusecomplaints@markmonitor.com
  Registrar Abuse Contact Phone: +1.2083895740
  Domain Status: clientDeleteProhibited https://icann.org/epp#clientDeleteProhibited
  Domain Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited
  Domain Status: clientUpdateProhibited https://icann.org/epp#clientUpdateProhibited
  Domain Status: serverDeleteProhibited https://icann.org/epp#serverDeleteProhibited
  Domain Status: serverTransferProhibited https://icann.org/epp#serverTransferProhibited
  Domain Status: serverUpdateProhibited https://icann.org/epp#serverUpdateProhibited
  Name Server: NS-1235.AWSDNS-26.ORG
  Name Server: NS-1537.AWSDNS-00.CO.UK
  Name Server: NS-416.AWSDNS-52.COM
  Name Server: NS-846.AWSDNS-41.NET
  DNSSEC: unsigned
  URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wicf/
>>> Last update of whois database: 2021-05-27T22:55:52Z <<<
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
riew 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
y the following terms of use: You agree that you may use this Data only
for lawful purposes and that under no circumstances will you use this Data
to: (1) allow, enable, or otherwise support the transmission of mass
unsolicited, commercial advertising or solicitations via e-mail, telephone,
or facsimile; or (2) enable high volume, automated, electronic processes
that apply to VeriSign (or its computer systems). The compilation,
repackaging, dissemination or other use of this Data is expressly
```

```
prohibited without the prior written consent of VeriSign. You agree not to
use electronic processes that are automated and high-volume to access or
query the Whois database except as reasonably necessary to register
domain names or modify existing registrations. VeriSign reserves the right
to restrict your access to the Whois database in its sole discretion to ensure
operational stability. VeriSign may restrict or terminate your access to the
Whois database for failure to abide by these terms of use. VeriSign
reserves the right to modify these terms at any time.
The Registry database contains ONLY .COM, .NET, .EDU domains and
Registrars.
Domain Name: elasticbeanstalk.com
Registry Domain ID: 1633430775_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.markmonitor.com
Registrar URL: http://www.markmonitor.com
Updated Date: 2019-08-26T12:19:56-0700
Creation Date: 2011-01-04T15:11:58-0800
Registrar Registration Expiration Date: 2024-01-04T00:00:00-0800
Registrar: MarkMonitor, Inc.
Registrar IANA ID: 292
Registrar Abuse Contact Email: abusecomplaints@markmonitor.com
Registrar Abuse Contact Phone: +1.2083895770
Domain Status: clientUpdateProhibited (https://www.icann.org/epp#clientUpdateProhibited)
Domain Status: clientTransferProhibited (https://www.icann.org/epp#clientTransferProhibited)
Domain Status: clientDeleteProhibited (https://www.icann.org/epp#clientDeleteProhibited)
Domain Status: serverUpdateProhibited (https://www.icann.org/epp#serverUpdateProhibited)
Domain Status: serverTransferProhibited (https://www.icann.org/epp#serverTransferProhibited)
Domain Status: serverDeleteProhibited (https://www.icann.org/epp#serverDeleteProhibited)
Registry Registrant ID:
Registrant Name: Hostmaster, Amazon Legal Dept.
Registrant Organization: Amazon Technologies, Inc.
Registrant Street: P.O. Box 8102
Registrant City: Reno
Registrant State/Province: NV
Registrant Postal Code: 89507
Registrant Country: US
Registrant Phone: +1.2062664064
Registrant Phone Ext:
Registrant Fax: +1.2062667010
Registrant Fax Ext:
Registrant Email: hostmaster@amazon.com
Registry Admin ID:
Admin Name: Hostmaster, Amazon Legal Dept.
Admin Organization: Amazon Technologies, Inc.
Admin Street: P.O. Box 8102
Admin City: Reno
Admin State/Province: NV
Admin Postal Code: 89507
Admin Country: US
Admin Phone: +1.2062664064
```

Admin Phone Ext:

```
Admin Phone: +1.2062664064
Admin Phone Ext:
Admin Fax: +1.2062667010
Admin Fax Ext:
Admin Email: hostmaster@amazon.com
Registry Tech ID:
Tech Name: Hostmaster, Amazon Legal Dept.
Tech Organization: Amazon Technologies, Inc.
Tech Street: P.O. Box 8102
Tech City: Reno
Tech State/Province: NV
Tech Postal Code: 89507
Tech Country: US
Tech Phone: +1.2062664064
Tech Phone Ext:
Tech Fax: +1.2062667010
Tech Fax Ext:
Tech Email: hostmaster@amazon.com
Name Server: ns-1235.awsdns-26.org
Name Server: ns-1537.awsdns-00.co.uk
Name Server: ns-416.awsdns-52.com
lame Server: ns-846.awsdns-41.net
DNSSEC: unsigned
URL of the ICANN WHOIS Data Problem Reporting System: http://wdprs.internic.net/
>>> Last update of WHOIS database: 2021-05-27T15:56:08-0700 <<<
For more information on WHOIS status codes, please visit:
 https://www.icann.org/resources/pages/epp-status-codes
If you wish to contact this domain's Registrant, Administrative, or Technical
contact, and such email address is not visible above, you may do so via our web
 orm, pursuant to ICANN's Temporary Specification. To verify that you are not a
robot, please enter your email address to receive a link to a page that
facilitates email communication with the relevant contact(s).
Web-based WHOIS:
 https://domains.markmonitor.com/whois
If you have a legitimate interest in viewing the non-public WHOIS details, send
your request and the reasons for your request to whoisrequest∂markmonitor.com
and specify the domain name in the subject line. We will review that request and
may ask for supporting documentation and explanation.
The data in MarkMonitor's WHOIS database is provided for information purposes,
and to assist persons in obtaining information about or related to a domain
name's registration record. While MarkMonitor believes the data to be accurate,
the data is provided "as is" with no guarantee or warranties regarding its
accuracy.
By submitting a WHOIS query, you agree that you will use this data only for
lawful purposes and that, under no circumstances will you use this data to:
```

(1) allow, enable, or otherwise support the transmission by email, telephone,

or facsimile of mass, unsolicited, commercial advertising, or spam; or

Name Server: ns-1235.awsdns-26.org Name Server: ns-1537.awsdns-00.co.uk Name Server: ns-416.awsdns-52.com Name Server: ns-846.awsdns-41.net DNSSEC: unsigned URL of the ICANN WHOIS Data Problem Reporting System: http://wdprs.internic.net/ >>> Last update of WHOIS database: 2021-05-27T15:56:08-0700 <<< For more information on WHOIS status codes, please visit: https://www.icann.org/resources/pages/epp-status-codes If you wish to contact this domain's Registrant, Administrative, or Technical contact, and such email address is not visible above, you may do so via our web form, pursuant to ICANN's Temporary Specification. To verify that you are not a robot, please enter your email address to receive a link to a page that facilitates email communication with the relevant contact(s). Web-based WHOIS: https://domains.markmonitor.com/whois If you have a legitimate interest in viewing the non-public WHOIS details, send your request and the reasons for your request to whoisrequest@markmonitor.com and specify the domain name in the subject line. We will review that request and may ask for supporting documentation and explanation. The data in MarkMonitor's WHOIS database is provided for information purposes, and to assist persons in obtaining information about or related to a domain name's registration record. While MarkMonitor believes the data to be accurate, the data is provided "as is" with no guarantee or warranties regarding its accuracy. By submitting a WHOIS query, you agree that you will use this data only for lawful purposes and that, under no circumstances will you use this data to: allow, enable, or otherwise support the transmission by email, telephone, or facsimile of mass, unsolicited, commercial advertising, or spam; or (2) enable high volume, automated, or electronic processes that send queries, data, or email to MarkMonitor (or its systems) or the domain name contacts (or its systems). MarkMonitor reserves the right to modify these terms at any time. By submitting this query, you agree to abide by this policy. MarkMonitor Domain Management(TM) Protecting companies and consumers in a digital world. Visit MarkMonitor at https://www.markmonitor.com Contact us at +1.8007459229 In Europe, at +44.02032062220

👦 kali)-[/home/khanuh/nismgrp1-env.eba-3pppnu5j.us-east-1.elasticbeanstalk.com]