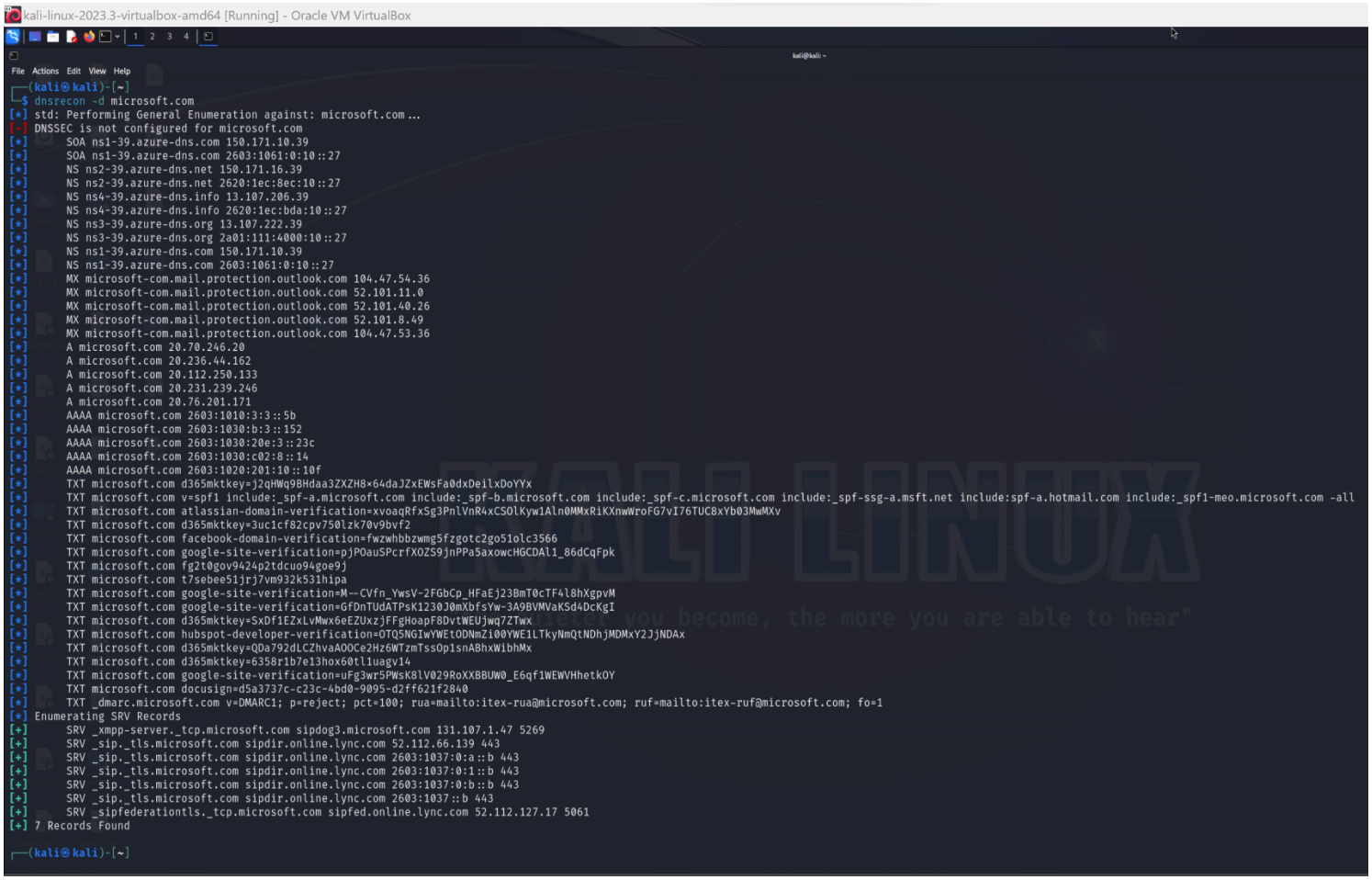
2. Start Of Authority (SOA): ns1-39.azure-dns.com
Server 1: ns1-39.azure-dns.com (IPv4: 150.171.10.39, IPv6: 2603:1061:0:10::27)
Server 2: ns2-39.azure-dns.net (IPv4: 150.171.16.39, IPv6: 2620:1ec:8ec:10::27)



Output:

```
$ dnsrecon -d microsoft.com
[*] std: Performing General Enumeration against: microsoft.com...
[-] DNSSEC is not configured for microsoft.com
[*]      SOA ns1-39.azure-dns.com 150.171.10.39
[*]      SOA ns1-39.azure-dns.com 2603:1061:0:10::27
[*]      NS ns2-39.azure-dns.net 150.171.16.39
[*]      NS ns2-39.azure-dns.net 2620:1ec:8ec:10::27
[*]      NS ns4-39.azure-dns.info 13.107.206.39
[*]      NS ns4-39.azure-dns.info 2620:1ec:bda:10::27
[*]      NS ns3-39.azure-dns.org 13.107.222.39
[*]      NS ns3-39.azure-dns.org 2a01:111:4000:10::27
```

```
[*]      NS ns1-39.azure-dns.com 150.171.10.39
[*]      NS ns1-39.azure-dns.com 2603:1061:0:10::27
[*]      MX microsoft-com.mail.protection.outlook.com 104.47.54.36
[*]      MX microsoft-com.mail.protection.outlook.com 52.101.11.0
[*]      MX microsoft-com.mail.protection.outlook.com 52.101.40.26
[*]      MX microsoft-com.mail.protection.outlook.com 52.101.8.49
[*]      MX microsoft-com.mail.protection.outlook.com 104.47.53.36
[*]      A microsoft.com 20.70.246.20
[*]      A microsoft.com 20.236.44.162
[*]      A microsoft.com 20.112.250.133
[*]      A microsoft.com 20.231.239.246
[*]      A microsoft.com 20.76.201.171
[*]      AAAA microsoft.com 2603:1010:3:3::5b
[*]      AAAA microsoft.com 2603:1030:b:3::152
[*]      AAAA microsoft.com 2603:1030:20e:3::23c
[*]      AAAA microsoft.com 2603:1030:c02:8::14
[*]      AAAA microsoft.com 2603:1020:201:10::10f
[*]      TXT microsoft.com d365mktkey=j2qHWq9BHdaa3ZXZH8x64daJZxEWsFa0dxDeilxDoYYx
[*]      TXT microsoft.com v=spf1 include:_spf-a.microsoft.com include:_spf-b.microsoft.com
include:_spf-c.microsoft.com include:_spf-ssg-a.msft.net include:spf-a.hotmail.com
include:_spf1-meo.microsoft.com -all
[*]      TXT microsoft.com
atlassian-domain-verification=xvoaqRfxSg3PnlVnR4xCSOlKyw1Aln0MMxRiKXnwWroFG7vI76TUC8xYb03MwMXv
[*]      TXT microsoft.com d365mktkey=3uc1cf82cpv750lzk70v9bvf2
[*]      TXT microsoft.com facebook-domain-verification=fwzwhbbzwmg5fzgotc2go51olc3566
[*]      TXT microsoft.com
google-site-verification=pjPOauSPcrfXOZS9jnPPa5axowcHGCDAl1_86dCqFpk
[*]      TXT microsoft.com fg2t0gov9424p2tdcuo94goe9j
[*]      TXT microsoft.com t7sebee51jrj7vm932k531hipa
[*]      TXT microsoft.com
google-site-verification=M--CVfn_YwsV-2FGbCp_HFaEj23BmT0cTF4l8hXgpvM
[*]      TXT microsoft.com
google-site-verification=GfDnTUdATPsK1230J0mXbfsYw-3A9BVMVaKSd4DcKgI
[*]      TXT microsoft.com d365mktkey=SxDf1EZxLvMwx6eEZUxzjFFgHoapF8DvtWEUjwq7ZTwx
[*]      TXT microsoft.com
hubspot-developer-verification=OTQ5NGIwYWEtODNmZi00YWE1LTkyNmQtNDhjMDMxY2JjNDAx
[*]      TXT microsoft.com d365mktkey=QDa792dLCZhvaAOOCe2Hz6WTzmTssOp1snABhxWibhMx
[*]      TXT microsoft.com d365mktkey=6358r1b7e13hox60tl1uagv14
[*]      TXT microsoft.com
google-site-verification=uFg3wr5PWsK8lV029RoXXBBUW0_E6qf1WEWVHhetkOY
[*]      TXT microsoft.com docusign=d5a3737c-c23c-4bd0-9095-d2ff621f2840
[*]      TXT _dmarc.microsoft.com v=DMARC1; p=reject; pct=100;
rua=mailto:itex-rua@microsoft.com; ruf=mailto:itex-ruf@microsoft.com; fo=1
[*] Enumerating SRV Records
[+]      SRV _xmpp-server._tcp.microsoft.com sipdog3.microsoft.com 131.107.1.47 5269
[+]      SRV _sip._tls.microsoft.com sipdir.online.lync.com 52.112.66.139 443
[+]      SRV _sip._tls.microsoft.com sipdir.online.lync.com 2603:1037:0:a::b 443
[+]      SRV _sip._tls.microsoft.com sipdir.online.lync.com 2603:1037:0:1::b 443
[+]      SRV _sip._tls.microsoft.com sipdir.online.lync.com 2603:1037:0:b::b 443
[+]      SRV _sip._tls.microsoft.com sipdir.online.lync.com 2603:1037::b 443
[+]      SRV _sipfederationtls._tcp.microsoft.com sipfed.online.lync.com 52.112.127.17 5061
```

3. **Record Types:**
   a. **Address Records: (zonetransfer.me)**
   b. **Mail Exchange/Records: (ALT1.ASPMX.L.GOOGLE.COM., ASPMX2.GOOGLEMAIL.COM., ALT2.ASPMX.L.GOOGLE.COM., ASPMX.L.GOOGLE.COM., ASPMX5.GOOGLEMAIL.COM., ASPMX4.GOOGLEMAIL.COM., & ASPMX3.GOOGLEMAIL.COM.)**

```
┌──(kali㉿kali)-[~]
└─$ host zonetransfer.me
zonetransfer.me has address 5.196.105.14
zonetransfer.me mail is handled by 20 ASPMX5.GOOGLEMAIL.COM.
zonetransfer.me mail is handled by 20 ASPMX4.GOOGLEMAIL.COM.
zonetransfer.me mail is handled by 20 ASPMX3.GOOGLEMAIL.COM.
zonetransfer.me mail is handled by 10 ALT1.ASPMX.L.GOOGLE.COM.
zonetransfer.me mail is handled by 20 ASPMX2.GOOGLEMAIL.COM.
zonetransfer.me mail is handled by 10 ALT2.ASPMX.L.GOOGLE.COM.
zonetransfer.me mail is handled by 0 ASPMX.L.GOOGLE.COM.
```

4. **Two name servers:**
   a. **nsztm1.digi.ninja**
   b. **nsztm2.digi.ninja**

```
┌──(kali㉿kali)-[~]
└─$ host -t ns zonetransfer.me
zonetransfer.me name server nsztm2.digi.ninja.
zonetransfer.me name server nsztm1.digi.ninja.
```

5. **What looks exposed & problematic:**
   1. **alltcpportsopen.firewall.test.zonetransfer.me**
      - **A hacker could see this port and attempt to open all the TCP ports to gain access to the system.**
   2. **ipv6actnow.org.zonetransfer.me has IPv6 address 2001:67c:2e8:11::c100:1332**
      - **This appears to be some sort of vulnerability in IPv6 that could be exploited by a threat actor.**

Output:

```
$ host -l zonetransfer.me nsztm1.digi.ninja
Using domain server:
Name: nsztm1.digi.ninja
Address: 81.4.108.41#53
Aliases:

zonetransfer.me has address 5.196.105.14
zonetransfer.me name server nsztm1.digi.ninja.
zonetransfer.me name server nsztm2.digi.ninja.
14.105.196.5.IN-ADDR.ARPA.zonetransfer.me domain name pointer www.zonetransfer.me.
asfdbbox.zonetransfer.me has address 127.0.0.1
canberra-office.zonetransfer.me has address 202.14.81.230
dc-office.zonetransfer.me has address 143.228.181.132
deadbeef.zonetransfer.me has IPv6 address dead:beaf::
```

```
email.zonetransfer.me has address 74.125.206.26
home.zonetransfer.me has address 127.0.0.1
internal.zonetransfer.me name server intns1.zonetransfer.me.
internal.zonetransfer.me name server intns2.zonetransfer.me.
intns1.zonetransfer.me has address 81.4.108.41
intns2.zonetransfer.me has address 167.88.42.94
office.zonetransfer.me has address 4.23.39.254
ipv6actnow.org.zonetransfer.me has IPv6 address 2001:67c:2e8:11::c100:1332
owa.zonetransfer.me has address 207.46.197.32
alltcpportsopen.firewall.test.zonetransfer.me has address 127.0.0.1
vpn.zonetransfer.me has address 174.36.59.154
www.zonetransfer.me has address 5.196.105.14
```

6. Number of Records: 23 Records
(nsztm1.digi.ninja has 11 and nsztm2.digi.ninja has 12.)

Output:

```
$ dnsenum zonetransfer.me
dnsenum VERSION:1.2.6

-----   zonetransfer.me   -----


Host's addresses:
__________________

zonetransfer.me.                         5822     IN    A        5.196.105.14


Name Servers:
______________

nsztm2.digi.ninja.                       10612    IN    A        34.225.33.2
nsztm1.digi.ninja.                       10166    IN    A        81.4.108.41


Mail (MX) Servers:
____________________

ALT1.ASPMX.L.GOOGLE.COM.                 105      IN    A        172.253.126.27
ASPMX2.GOOGLEMAIL.COM.                   105      IN    A        172.253.126.27
ALT2.ASPMX.L.GOOGLE.COM.                 105      IN    A        173.194.219.26
ASPMX.L.GOOGLE.COM.                      105      IN    A        74.125.202.27
ASPMX5.GOOGLEMAIL.COM.                   105      IN    A        172.217.197.27
ASPMX4.GOOGLEMAIL.COM.                   105      IN    A        142.250.112.27
ASPMX3.GOOGLEMAIL.COM.                   105      IN    A        173.194.219.27


Trying Zone Transfers and getting Bind Versions:
_________________________________________________
```

```
Trying Zone Transfer for zonetransfer.me on nsztm1.digi.ninja ...
zonetransfer.me.                          7200     IN    SOA              (
zonetransfer.me.                          300      IN    HINFO        "Casio
zonetransfer.me.                          301      IN    TXT              (
zonetransfer.me.                          7200     IN    MX               0
zonetransfer.me.                          7200     IN    MX              10
zonetransfer.me.                          7200     IN    MX              10
zonetransfer.me.                          7200     IN    MX              20
zonetransfer.me.                          7200     IN    MX              20
zonetransfer.me.                          7200     IN    MX              20
zonetransfer.me.                          7200     IN    MX              20
zonetransfer.me.                          7200     IN    A        5.196.105.14
zonetransfer.me.                          7200     IN    NS       nsztm1.digi.ninja.
zonetransfer.me.                          7200     IN    NS       nsztm2.digi.ninja.
_acme-challenge.zonetransfer.me.          301      IN    TXT              (
_sip._tcp.zonetransfer.me.                14000    IN    SRV              0
14.105.196.5.IN-ADDR.ARPA.zonetransfer.me. 7200     IN    PTR      www.zonetransfer.me.
asfdbauthdns.zonetransfer.me.             7900     IN    AFSDB            1
asfdbbox.zonetransfer.me.                 7200     IN    A         127.0.0.1
asfdbvolume.zonetransfer.me.              7800     IN    AFSDB            1
canberra-office.zonetransfer.me.          7200     IN    A        202.14.81.230
cmdexec.zonetransfer.me.                  300      IN    TXT              ";
contact.zonetransfer.me.                  2592000  IN    TXT              (
dc-office.zonetransfer.me.                7200     IN    A        143.228.181.132
deadbeef.zonetransfer.me.                 7201     IN    AAAA     dead:beaf::
dr.zonetransfer.me.                       300      IN    LOC              53
DZC.zonetransfer.me.                      7200     IN    TXT         AbCdEfG
email.zonetransfer.me.                    2222     IN    NAPTR            (
email.zonetransfer.me.                    7200     IN    A        74.125.206.26
Hello.zonetransfer.me.                    7200     IN    TXT             "Hi
home.zonetransfer.me.                     7200     IN    A         127.0.0.1
Info.zonetransfer.me.                     7200     IN    TXT              (
internal.zonetransfer.me.                 300      IN    NS       intns1.zonetransfer.me.
internal.zonetransfer.me.                 300      IN    NS       intns2.zonetransfer.me.
intns1.zonetransfer.me.                   300      IN    A        81.4.108.41
intns2.zonetransfer.me.                   300      IN    A        167.88.42.94
office.zonetransfer.me.                   7200     IN    A        4.23.39.254
ipv6actnow.org.zonetransfer.me.           7200     IN    AAAA     2001:67c:2e8:11::c100:1332
owa.zonetransfer.me.                      7200     IN    A        207.46.197.32
robinwood.zonetransfer.me.                302      IN    TXT          "Robin
rp.zonetransfer.me.                       321      IN    RP               (
sip.zonetransfer.me.                      3333     IN    NAPTR            (
sqli.zonetransfer.me.                     300      IN    TXT             "'
sshock.zonetransfer.me.                   7200     IN    TXT            "()
staging.zonetransfer.me.                  7200     IN    CNAME    www.sydneyoperahouse.com.
alltcpportsopen.firewall.test.zonetransfer.me. 301      IN    A         127.0.0.1
testing.zonetransfer.me.                  301      IN    CNAME    www.zonetransfer.me.
vpn.zonetransfer.me.                      4000     IN    A        174.36.59.154
www.zonetransfer.me.                      7200     IN    A        5.196.105.14
```

```
xss.zonetransfer.me.                    300      IN    TXT
"'><script>alert('Boo')</script>"

Trying Zone Transfer for zonetransfer.me on nsztm2.digi.ninja ...
zonetransfer.me.                        7200     IN    SOA              (
zonetransfer.me.                        300      IN    HINFO        "Casio
zonetransfer.me.                        301      IN    TXT              (
zonetransfer.me.                        7200     IN    MX               0
zonetransfer.me.                        7200     IN    MX              10
zonetransfer.me.                        7200     IN    MX              10
zonetransfer.me.                        7200     IN    MX              20
zonetransfer.me.                        7200     IN    MX              20
zonetransfer.me.                        7200     IN    MX              20
zonetransfer.me.                        7200     IN    MX              20
zonetransfer.me.                        7200     IN    A        5.196.105.14
zonetransfer.me.                        7200     IN    NS       nsztm1.digi.ninja.
zonetransfer.me.                        7200     IN    NS       nsztm2.digi.ninja.
_acme-challenge.zonetransfer.me.        301      IN    TXT              (
_acme-challenge.zonetransfer.me.        301      IN    TXT              (
_sip._tcp.zonetransfer.me.              14000    IN    SRV              0
14.105.196.5.IN-ADDR.ARPA.zonetransfer.me. 7200     IN    PTR      www.zonetransfer.me.
asfdbauthdns.zonetransfer.me.           7900     IN    AFSDB            1
asfdbbox.zonetransfer.me.               7200     IN    A         127.0.0.1
asfdbvolume.zonetransfer.me.            7800     IN    AFSDB            1
canberra-office.zonetransfer.me.        7200     IN    A        202.14.81.230
cmdexec.zonetransfer.me.                300      IN    TXT             ";
contact.zonetransfer.me.                2592000  IN    TXT              (
dc-office.zonetransfer.me.              7200     IN    A        143.228.181.132
deadbeef.zonetransfer.me.               7201     IN    AAAA     dead:beaf::
dr.zonetransfer.me.                     300      IN    LOC             53
DZC.zonetransfer.me.                    7200     IN    TXT         AbCdEfG
email.zonetransfer.me.                  2222     IN    NAPTR            (
email.zonetransfer.me.                  7200     IN    A        74.125.206.26
Hello.zonetransfer.me.                  7200     IN    TXT             "Hi
home.zonetransfer.me.                   7200     IN    A         127.0.0.1
Info.zonetransfer.me.                   7200     IN    TXT              (
internal.zonetransfer.me.               300      IN    NS       intns1.zonetransfer.me.
internal.zonetransfer.me.               300      IN    NS       intns2.zonetransfer.me.
intns1.zonetransfer.me.                 300      IN    A        81.4.108.41
intns2.zonetransfer.me.                 300      IN    A        52.91.28.78
office.zonetransfer.me.                 7200     IN    A        4.23.39.254
ipv6actnow.org.zonetransfer.me.         7200     IN    AAAA     2001:67c:2e8:11::c100:1332
owa.zonetransfer.me.                    7200     IN    A        207.46.197.32
robinwood.zonetransfer.me.              302      IN    TXT          "Robin
rp.zonetransfer.me.                     321      IN    RP               (
sip.zonetransfer.me.                    3333     IN    NAPTR            (
sqli.zonetransfer.me.                   300      IN    TXT             "'
sshock.zonetransfer.me.                 7200     IN    TXT            "()
staging.zonetransfer.me.                7200     IN    CNAME    www.sydneyoperahouse.com.
alltcpportsopen.firewall.test.zonetransfer.me. 301      IN    A         127.0.0.1
testing.zonetransfer.me.                301      IN    CNAME    www.zonetransfer.me.
```

```
vpn.zonetransfer.me.                    4000     IN    A        174.36.59.154
www.zonetransfer.me.                    7200     IN    A        5.196.105.14
xss.zonetransfer.me.                    300      IN    TXT
"'><script>alert('Boo')</script>"

Brute forcing with /usr/share/dnsenum/dns.txt:
_____________________________________________


zonetransfer.me class C netranges:
___________________________________

 4.23.39.0/24
 5.196.105.0/24
 52.91.28.0/24
 74.125.206.0/24
 81.4.108.0/24
 143.228.181.0/24
 167.88.42.0/24
 174.36.59.0/24
 202.14.81.0/24
 207.46.197.0/24

Performing reverse lookup on 2560 ip addresses:
_______________________________________________


0 results out of 2560 IP addresses.

zonetransfer.me ip blocks:
__________________________

done.
```