Remote Monitoring Nodes in Somalia

Survey

We conducted an extensive search for pingable nodes in Somalia. The tool PingER Host Searcher was used with a variety of inputs. We did not find any node registered under the domain .so. The servers -- commercial, non-profit as well as academic websites -- which we did find after a manual search were not hosted within Somalia. The universities in Somalia were also scanned, however all were hosted in countries other than Somalia.

We then used nmap to scan a set IP ranges registered by Somalia. To date (07/31/2009) we haven't scanned all the ranges. However among those that we have scanned we did find some pingable nodes. Please see the next section for these results. We verified our results using the GeoIPTool.

Legend: Red - No pingable nodes; Grey - not tested; and Green: Has pingable node.

80.78.16.156 80.78.16.159
80.78.18.120 80.78.18.127
80.78.20.232 80.78.20.239
80.84.146.32 80.84.146.39
80.231.23.0 80.231.23.255
82.205.243.64 82.205.243.71
82.206.130.192 82.206.130.255
83.229.27.0 83.229.27.255
83.229.63.0 83.229.63.127
193.219.208.192 193.219.208.207
193.219.209.0 193.219.209.31
193.219.209.112 193.219.209.127
193.219.209.224 193.219.209.255
193.219.211.176 193.219.211.255
193.219.236.192 193.219.236.255
193.219.242.0 193.219.243.255
193.220.17.64 193.220.17.255
193.220.44.0 193.220.44.255
193.220.48.0 193.220.49.255
193.220.51.0 193.220.51.255
193.220.73.0 193.220.73.95
193.220.75.0 193.220.75.63
193.220.208.0 193.220.211.255
202.80.171.0 202.80.171.63
205.234.179.24 205.234.179.31
213.187.131.144 213.187.131.151
213.187.131.176 213.187.131.183
213.255.193.208 213.255.193.215
213.255.198.160 213.255.198.167
213.255.198.216 213.255.198.223
216.246.26.192 216.246.26.199
217.15.124.0 217.15.124.127
217.20.243.1 217.20.243.63
217.74.232.0 217.74.232.127
217.194.157.192 217.194.157.199

We obtained 5 hosts by this method. They were: 80.231.23.62, 80.231.23.133, 80.231.23.77, 80.231.23.88, 80.231.23.247. they are all in the same 4th octet and believed to be in the Dur Dur Telecom domain. This not only violates the principal of obtaining diverse hosts to represent a country, but also since it is a Telecom is likely to have better connectivity than
most of the hosts in the country. However, being unable to find any other hosts we added these to the database.

Pingable IP addresses

```
80.231.23.51
80.231.23.56
80.231.23.57
80.231.23.62
80.231.23.63
80.231.23.64
80.231.23.65
80.231.23.66
80.231.23.69
80.231.23.70
80.231.23.73
80.231.23.76
80.231.23.77
80.231.23.78
80.231.23.80
80.231.23.83
80.231.23.86
80.231.23.88
80.231.23.93
80.231.23.95
80.231.23.102
80.231.23.103
80.231.23.104
80.231.23.117
80.231.23.118
80.231.23.121
80.231.23.123
80.231.23.124
80.231.23.125
80.231.23.128
80.231.23.129
80.231.23.133
80.231.23.137
80.231.23.236
80.231.23.247
80.231.23.252
80.231.23.253
```

Whois results

```
umar@ptolemy ~ > whois  80.231.23.95

OrgName:    RIPE Network Coordination Centre
OrgID:      RIPE
Address:    P.O. Box 10096
City:       Amsterdam
StateProv:
PostalCode: 1001EB
Country:    NL

ReferralServer: whois://whois.ripe.net:43

NetRange:   80.0.0.0 - 80.255.255.255
CIDR:       80.0.0.0/8
NetName:    80-RIPE
NetHandle:  NET-80-0-0-0-1
Parent:
NetType:    Allocated to RIPE NCC
NameServer: NS-PRI.RIPE.NET
NameServer: NS3.NIC.FR
NameServer: SUNIC.SUNET.SE
NameServer: SNS-PB.ISC.ORG
NameServer: SEC1.APNIC.NET
NameServer: SEC3.APNIC.NET
NameServer: TINNIE.ARIN.NET
Comment:    These addresses have been further assigned to users in
Comment:    the RIPE NCC region. Contact information can be found in
```

```
Comment:    the RIPE database at http://www.ripe.net/whois
RegDate:
Updated:    2009-03-25

# ARIN WHOIS database, last updated 2009-07-30 19:02
# Enter ? for additional hints on searching ARIN's WHOIS database.
% This is the RIPE Database query service.
% The objects are in RPSL format.
%
% The RIPE Database is subject to Terms and Conditions.
% See http://www.ripe.net/db/support/db-terms-conditions.pdf

% Note: This output has been filtered.
%       To receive output for a database update, use the "-B" flag.

% Information related to '80.231.23.0 - 80.231.23.255'

inetnum:      80.231.23.0 - 80.231.23.255
netname:      DUR-DUR-TELECOM-TGB
descr:        Dur-Dur Telecom
country:      SO
admin-c:      MAD26-RIPE
tech-c:       OM706-RIPE
status:       ASSIGNED PA
mnt-by:       AS8297-MNT
source:       RIPE # Filtered

person:       Mohamed Abshir Dirie
address:      Bakaro Markt
address:      Shaakir Building First Floor
address:      Somalia
phone:        +002521-601611
fax-no:       +002525934011
e-mail:       dirie@t-online.de
nic-hdl:      MAD26-RIPE
source:       RIPE # Filtered

person:       Omar Mire
address:      Bakaro Markt
address:      Shaakir Building First Floor
address:      Somalia
phone:        +002525934011
fax-no:       +002521-601611
e-mail:       omire2001@yahoo.com
nic-hdl:      OM706-RIPE
source:       RIPE # Filtered

% Information related to '80.231.0.0/16AS6453'

route:          80.231.0.0/16
descr:          TATA Communications
origin:         AS6453
mnt-by:         TELEGLOBE-MNT
source:         RIPE # Filtered
```

Snippet of NMAP Results Dump

```
umar@ptolemy ~ > sudo nmap -sS 80.231.23.0-255

Starting Nmap 4.85BETA9 ( http://nmap.org ) at 2009-07-31 16:41 PDT
All 1000 scanned ports on 80.231.23.30 are closed

Interesting ports on 80.231.23.34:
Not shown: 999 closed ports
PORT   STATE SERVICE
23/tcp open  telnet

Interesting ports on 80.231.23.42:
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```
Not shown: 999 closed ports
PORT   STATE SERVICE
23/tcp open  telnet

Interesting ports on 80.231.23.47:
Not shown: 999 closed ports
PORT   STATE SERVICE
23/tcp open  telnet

Interesting ports on 80.231.23.48:
Not shown: 999 closed ports
PORT   STATE SERVICE
23/tcp open  telnet

All 1000 scanned ports on 80.231.23.51 are closed

All 1000 scanned ports on 80.231.23.56 are closed

All 1000 scanned ports on 80.231.23.57 are closed

All 1000 scanned ports on 80.231.23.62 are closed

All 1000 scanned ports on 80.231.23.63 are closed

All 1000 scanned ports on 80.231.23.64 are closed

All 1000 scanned ports on 80.231.23.65 are closed

All 1000 scanned ports on 80.231.23.66 are closed

All 1000 scanned ports on 80.231.23.69 are closed

All 1000 scanned ports on 80.231.23.70 are closed

All 1000 scanned ports on 80.231.23.73 are closed

All 1000 scanned ports on 80.231.23.76 are closed

All 1000 scanned ports on 80.231.23.77 are closed

All 1000 scanned ports on 80.231.23.78 are closed

All 1000 scanned ports on 80.231.23.80 are closed

All 1000 scanned ports on 80.231.23.83 are closed

All 1000 scanned ports on 80.231.23.86 are closed

All 1000 scanned ports on 80.231.23.88 are closed

All 1000 scanned ports on 80.231.23.93 are closed

All 1000 scanned ports on 80.231.23.95 are closed

Interesting ports on 80.231.23.102:
Not shown: 999 closed ports
PORT   STATE SERVICE
23/tcp open  telnet

All 1000 scanned ports on 80.231.23.103 are closed

All 1000 scanned ports on 80.231.23.104 are closed

All 1000 scanned ports on 80.231.23.117 are closed

All 1000 scanned ports on 80.231.23.118 are closed

All 1000 scanned ports on 80.231.23.121 are closed

All 1000 scanned ports on 80.231.23.123 are closed
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```
Interesting ports on 80.231.23.124:
Not shown: 999 closed ports
PORT   STATE SERVICE
23/tcp open  telnet

All 1000 scanned ports on 80.231.23.125 are closed

All 1000 scanned ports on 80.231.23.128 are closed

Interesting ports on 80.231.23.129:
Not shown: 999 closed ports
PORT   STATE SERVICE
23/tcp open  telnet

All 1000 scanned ports on 80.231.23.133 are closed

All 1000 scanned ports on 80.231.23.137 are closed

All 1000 scanned ports on 80.231.23.236 are closed

All 1000 scanned ports on 80.231.23.247 are closed

All 1000 scanned ports on 80.231.23.252 are closed

All 1000 scanned ports on 80.231.23.253 are closed

Nmap done: 256 IP addresses (42 hosts up) scanned in 116.21 seconds
umar@ptolemy ~ > ping 80.231.23.133
PING 80.231.23.133 (80.231.23.133): 56 data bytes
64 bytes from 80.231.23.133: icmp_seq=0 ttl=52 time=896.898 ms
64 bytes from 80.231.23.133: icmp_seq=1 ttl=52 time=923.221 ms
64 bytes from 80.231.23.133: icmp_seq=2 ttl=52 time=858.702 ms
^C
--- 80.231.23.133 ping statistics ---
4 packets transmitted, 3 packets received, 25% packet loss
round-trip min/avg/max/stddev = 858.702/892.940/923.221/26.488 ms
umar@ptolemy ~ > ping 80.231.23.137
PING 80.231.23.137 (80.231.23.137): 56 data bytes
64 bytes from 80.231.23.137: icmp_seq=0 ttl=238 time=893.453 ms
64 bytes from 80.231.23.137: icmp_seq=1 ttl=238 time=843.788 ms
64 bytes from 80.231.23.137: icmp_seq=2 ttl=238 time=893.968 ms
64 bytes from 80.231.23.137: icmp_seq=3 ttl=238 time=849.055 ms
^C
--- 80.231.23.137 ping statistics ---
5 packets transmitted, 4 packets received, 20% packet loss
round-trip min/avg/max/stddev = 843.788/870.066/893.968/23.718 ms
umar@ptolemy ~ > ping -c 2 80.231.23.236
PING 80.231.23.236 (80.231.23.236): 56 data bytes
64 bytes from 80.231.23.236: icmp_seq=0 ttl=243 time=908.749 ms
64 bytes from 80.231.23.236: icmp_seq=1 ttl=243 time=850.952 ms

--- 80.231.23.236 ping statistics ---
2 packets transmitted, 2 packets received, 0% packet loss
round-trip min/avg/max/stddev = 850.952/879.851/908.749/28.898 ms
umar@ptolemy ~ > ping -c 2 80.231.23.247
PING 80.231.23.247 (80.231.23.247): 56 data bytes
64 bytes from 80.231.23.247: icmp_seq=0 ttl=243 time=862.368 ms
64 bytes from 80.231.23.247: icmp_seq=1 ttl=243 time=907.638 ms

--- 80.231.23.247 ping statistics ---
2 packets transmitted, 2 packets received, 0% packet loss
round-trip min/avg/max/stddev = 862.368/885.003/907.638/22.635 ms
umar@ptolemy ~ > ping -c 2 80.231.23.252
PING 80.231.23.252 (80.231.23.252): 56 data bytes
64 bytes from 80.231.23.252: icmp_seq=0 ttl=243 time=882.087 ms
64 bytes from 80.231.23.252: icmp_seq=1 ttl=243 time=894.030 ms

--- 80.231.23.252 ping statistics ---
2 packets transmitted, 2 packets received, 0% packet loss
round-trip min/avg/max/stddev = 882.087/888.058/894.030/5.972 ms
umar@ptolemy ~ > ping -c 2 80.231.23.253
```

```
PING 80.231.23.253 (80.231.23.253): 56 data bytes
64 bytes from 80.231.23.253: icmp_seq=0 ttl=244 time=852.748 ms
64 bytes from 80.231.23.253: icmp_seq=1 ttl=244 time=890.497 ms

--- 80.231.23.253 ping statistics ---
2 packets transmitted, 2 packets received, 0% packet loss
round-trip min/avg/max/stddev = 852.748/871.622/890.497/18.875 ms
umar@ptolemy ~ >
```