

Traceroute

www.africau.edu

DAY1

saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu

traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 11.107 ms 5.208 ms 5.210 ms
2 96.120.42.5 (96.120.42.5) 21.055 ms 18.313 ms 17.311 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 20.353 ms 15.614 ms 13.121 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 14.478 ms 15.852 ms 16.990 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 20.054 ms 15.485 ms 14.020 ms
6 be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 24.096 ms
  be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 31.595 ms
  be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 22.994 ms
7 be-2104-pe04.350ecermak.il.ibone.comcast.net (96.110.37.34) 20.338 ms
  be-2203-pe03.350ecermak.il.ibone.comcast.net (96.110.37.22) 22.276 ms
  be-2103-pe03.350ecermak.il.ibone.comcast.net (96.110.37.18) 28.503 ms
8 96-87-9-226-static.hfc.comcastbusiness.net (96.87.9.226) 19.571 ms
  66.208.233.218 (66.208.233.218) 23.872 ms
  96-87-9-230-static.hfc.comcastbusiness.net (96.87.9.230) 19.804 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 45.499 ms 47.853 ms 45.200 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15

traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 17.028 ms 6.531 ms 4.574 ms
2 96.120.42.5 (96.120.42.5) 19.523 ms 12.007 ms 15.439 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 13.679 ms 16.554 ms 13.594 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 38.562 ms 16.655 ms 17.158 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 36.894 ms 25.936 ms 19.400 ms
6 be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 22.443 ms 26.252 ms 25.370 ms
7 be-2111-pe11.350ecermak.il.ibone.comcast.net (96.110.33.194) 28.472 ms
  be-2413-pe13.350ecermak.il.ibone.comcast.net (96.110.32.98) 30.047 ms
  be-2104-pe04.350ecermak.il.ibone.comcast.net (96.110.37.34) 24.441 ms
8 50.208.235.170 (50.208.235.170) 24.709 ms
  66.208.233.218 (66.208.233.218) 25.673 ms
  50.208.235.174 (50.208.235.174) 41.870 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 57.847 ms 42.083 ms 44.511 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu

traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 14.871 ms 5.066 ms 5.116 ms
2 96.120.42.5 (96.120.42.5) 13.584 ms 12.931 ms 15.915 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 11.382 ms 18.492 ms 17.471 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 12.298 ms 15.560 ms 11.237 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 17.371 ms 15.609 ms 13.498 ms
6 * be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 44.337 ms *
7 be-2303-pe03.350ecermak.il.ibone.comcast.net (96.110.37.26) 23.523 ms
  be-2411-pe11.350ecermak.il.ibone.comcast.net (96.110.33.206) 24.094 ms
  be-2404-pe04.350ecermak.il.ibone.comcast.net (96.110.37.46) 20.827 ms
8 50.208.235.178 (50.208.235.178) 25.165 ms
  75.149.229.142 (75.149.229.142) 21.969 ms
  75.149.231.2 (75.149.231.2) 20.879 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 43.467 ms 43.486 ms 44.881 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15
traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets

- 1 10.0.0.1 (10.0.0.1) 15.374 ms 4.478 ms 4.801 ms
- 2 96.120.42.5 (96.120.42.5) 15.465 ms 14.196 ms 12.446 ms
- 3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 12.505 ms 11.639 ms 15.103 ms
- 4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 14.371 ms 13.016 ms 16.404 ms
- 5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 18.301 ms 26.052 ms 14.426 ms
- 6 be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 23.627 ms
be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 23.795 ms *
- 7 be-2413-pe13.350ecermak.il.ibone.comcast.net (96.110.32.98) 39.444 ms
be-2104-pe04.350ecermak.il.ibone.comcast.net (96.110.37.34) 23.171 ms
be-2304-pe04.350ecermak.il.ibone.comcast.net (96.110.37.42) 20.064 ms
- 8 75.149.230.26 (75.149.230.26) 28.972 ms
75.149.231.238 (75.149.231.238) 31.316 ms
66.208.233.90 (66.208.233.90) 23.999 ms
- 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 48.564 ms 43.087 ms 43.996 ms

AUTONOMOUS SYSTEM NUMBER OR ISP FOR EACH ROUTER:

Output:

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.37.22

NetRange: 96.64.0.0 - 96.124.255.255

CIDR: 96.120.0.0/14, 96.124.0.0/16, 96.64.0.0/11, 96.96.0.0/12, 96.112.0.0/13

NetName: CABLE-1

NetHandle: NET-96-64-0-0-1

Parent: NET96 (NET-96-0-0-0-0)

NetType: Direct Allocation

OriginAS: AS7922

Organization: Comcast Cable Communications, LLC (CCCS)

RegDate: 2008-02-21

Updated: 2021-01-25

Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>

OrgName: Comcast Cable Communications, LLC

OrgId: CCCS

Address: 1800 Bishops Gate Blvd

City: Mt Laurel

StateProv: NJ

PostalCode: 08054

Country: US

RegDate: 2001-09-18

Updated: 2020-11-18

Ref: <https://rdap.arin.net/registry/entity/CCCS>

OrgAbuseHandle: NAPO-ARIN

OrgAbuseName: Network Abuse and Policy Observance

OrgAbusePhone: +1-888-565-4329

OrgAbuseEmail: abuse@comcast.net

OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>

OrgRoutingHandle: ROUTI25-ARIN

OrgRoutingName: Routing

OrgRoutingPhone: +1-856-792-2300

OrgRoutingEmail: routing@comcast.com

OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>

OrgTechHandle: IC161-ARIN

OrgTechName: Comcast Cable Communications Inc

OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.32.98
NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.96.0.0/12, 96.64.0.0/11, 96.112.0.0/13, 96.120.0.0/14, 96.124.0.0/16
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 50.208.235.178
NetRange: 50.128.0.0 - 50.255.255.255
CIDR: 50.128.0.0/9
NetName: CCCH3-4
NetHandle: NET-50-128-0-0-1
Parent: NET50 (NET-50-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2010-10-21
Updated: 2021-01-25

Ref: <https://rdap.arin.net/registry/ip/50.128.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 75.149.230.26
NetRange: 75.144.0.0 - 75.151.255.255
CIDR: 75.144.0.0/13
NetName: CBC-CM-5
NetHandle: NET-75-144-0-0-1
Parent: NET75 (NET-75-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2006-09-25
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/75.144.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgAbuseHandle: NAPO-ARIN

OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %

DAY2

saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu

traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 6.853 ms 9.959 ms 6.306 ms
2 96.120.42.5 (96.120.42.5) 19.746 ms 26.217 ms 15.524 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 15.517 ms 14.804 ms 16.311 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 14.877 ms 33.840 ms 17.518 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 42.761 ms 25.810 ms 24.253 ms
6 be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 22.082 ms 23.196 ms *
7 be-2313-pe13.350ecermak.il.ibone.comcast.net (96.110.32.94) 37.541 ms
  be-2113-pe13.350ecermak.il.ibone.comcast.net (96.110.32.86) 23.226 ms
  be-2311-pe11.350ecermak.il.ibone.comcast.net (96.110.33.202) 20.584 ms
8 75.149.229.142 (75.149.229.142) 20.325 ms
  75.149.231.2 (75.149.231.2) 21.829 ms
  75.149.229.142 (75.149.229.142) 19.952 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 41.881 ms 42.997 ms 44.142 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15

traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 6.677 ms 6.268 ms 4.938 ms
2 96.120.42.5 (96.120.42.5) 14.155 ms 13.321 ms 13.137 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 12.801 ms 22.257 ms 12.270 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 12.786 ms 12.925 ms 12.705 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 18.367 ms 26.827 ms 17.511 ms
6 be-32131-cs23.350ecermak.il.ibone.comcast.net (96.110.42.185) 33.616 ms
  be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 23.833 ms
  be-32131-cs23.350ecermak.il.ibone.comcast.net (96.110.42.185) 20.508 ms
7 be-2111-pe11.350ecermak.il.ibone.comcast.net (96.110.33.194) 21.193 ms
  be-2413-pe13.350ecermak.il.ibone.comcast.net (96.110.32.98) 20.414 ms
  be-2111-pe11.350ecermak.il.ibone.comcast.net (96.110.33.194) 22.034 ms
8 66.208.233.90 (66.208.233.90) 24.026 ms
  50.208.235.178 (50.208.235.178) 19.381 ms
  96-87-9-226-static.hfc.comcastbusiness.net (96.87.9.226) 22.725 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 43.115 ms 43.574 ms 43.171 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu

traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 15.333 ms 5.560 ms 4.989 ms
2 96.120.42.5 (96.120.42.5) 14.944 ms 12.625 ms 17.378 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 14.739 ms 12.481 ms 11.975 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 14.316 ms 12.751 ms 12.059 ms
```

5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 19.788 ms 17.269 ms 20.575 ms
 6 be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 41.500 ms
 be-32131-cs23.350ecermak.il.ibone.comcast.net (96.110.42.185) 20.950 ms *
 7 be-2311-pe11.350ecermak.il.ibone.comcast.net (96.110.33.202) 31.697 ms
 be-2204-pe04.350ecermak.il.ibone.comcast.net (96.110.37.38) 21.116 ms
 be-2311-pe11.350ecermak.il.ibone.comcast.net (96.110.33.202) 28.150 ms
 8 96-87-9-226-static.hfc.comcastbusiness.net (96.87.9.226) 24.156 ms
 75.149.231.238 (75.149.231.238) 19.665 ms
 66.208.233.90 (66.208.233.90) 23.298 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 46.558 ms 41.877 ms 49.197 ms
 saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15
 traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets
 1 10.0.0.1 (10.0.0.1) 19.843 ms 6.973 ms 4.449 ms
 2 96.120.42.5 (96.120.42.5) 14.964 ms 12.547 ms 12.731 ms
 3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 16.584 ms 12.895 ms 12.433 ms
 4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 17.002 ms 14.841 ms 14.075 ms
 5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 14.274 ms 14.773 ms 23.835 ms
 6 be-32131-cs23.350ecermak.il.ibone.comcast.net (96.110.42.185) 21.753 ms
 be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 29.752 ms
 be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 24.220 ms
 7 be-2211-pe11.350ecermak.il.ibone.comcast.net (96.110.33.198) 21.068 ms
 be-2213-pe13.350ecermak.il.ibone.comcast.net (96.110.32.90) 24.643 ms
 be-2204-pe04.350ecermak.il.ibone.comcast.net (96.110.37.38) 24.697 ms
 8 96-87-9-230-static.hfc.comcastbusiness.net (96.87.9.230) 21.934 ms
 66.208.233.218 (66.208.233.218) 23.856 ms
 96-87-9-226-static.hfc.comcastbusiness.net (96.87.9.226) 21.550 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 43.337 ms 44.745 ms 45.991 ms

AUTONOMOUS SYSTEM NUMBER OR ISP FOR EACH ROUTER:

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.32.86
 NetRange: 96.64.0.0 - 96.124.255.255
 CIDR: 96.112.0.0/13, 96.124.0.0/16, 96.64.0.0/11, 96.120.0.0/14, 96.96.0.0/12
 NetName: CABLE-1
 NetHandle: NET-96-64-0-0-1
 Parent: NET96 (NET-96-0-0-0-0)
 NetType: Direct Allocation
 OriginAS: AS7922
 Organization: Comcast Cable Communications, LLC (CCCS)
 RegDate: 2008-02-21
 Updated: 2021-01-25
 Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
 OrgName: Comcast Cable Communications, LLC
 OrgId: CCCS
 Address: 1800 Bishops Gate Blvd
 City: Mt Laurel
 StateProv: NJ
 PostalCode: 08054
 Country: US
 RegDate: 2001-09-18
 Updated: 2020-11-18
 Ref: <https://rdap.arin.net/registry/entity/CCCS>

OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.32.98
NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.124.0.0/16, 96.96.0.0/12, 96.112.0.0/13, 96.64.0.0/11, 96.120.0.0/14
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 75.149.231.238

NetRange: 75.144.0.0 - 75.151.255.255
CIDR: 75.144.0.0/13
NetName: CBC-CM-5
NetHandle: NET-75-144-0-0-1
Parent: NET75 (NET-75-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2006-09-25
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/75.144.0.0>
Comcast Cable Communications, LLC (CCCS)
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 66.208.233.218

NetRange: 66.208.192.0 - 66.208.255.255
CIDR: 66.208.192.0/18
NetName: CBC-CM
NetHandle: NET-66-208-192-0-1
Parent: NET66 (NET-66-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2001-12-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/66.208.192.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc

OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>

DAY3

saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu

traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 16.757 ms 4.836 ms 4.668 ms
2 96.120.42.5 (96.120.42.5) 13.334 ms 11.771 ms 12.004 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 12.516 ms 12.430 ms 12.156 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 13.151 ms 12.068 ms 15.780 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 14.912 ms 13.981 ms 22.476 ms
6 be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 24.325 ms * *
7 be-2113-pe13.350ecermak.il.ibone.comcast.net (96.110.32.86) 25.421 ms
  be-2103-pe03.350ecermak.il.ibone.comcast.net (96.110.37.18) 21.269 ms
  be-2113-pe13.350ecermak.il.ibone.comcast.net (96.110.32.86) 79.925 ms
8 66.208.233.90 (66.208.233.90) 21.869 ms
  75.149.231.2 (75.149.231.2) 24.170 ms
  66.208.233.218 (66.208.233.218) 21.944 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 43.897 ms 45.971 ms 49.499 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15

traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 10.638 ms 4.348 ms 4.819 ms
2 96.120.42.5 (96.120.42.5) 16.361 ms 14.699 ms 15.969 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 13.990 ms 25.096 ms 12.807 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 13.125 ms 14.064 ms 11.645 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 20.816 ms 22.066 ms 17.863 ms
6 * be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 34.202 ms *
7 be-2313-pe13.350ecermak.il.ibone.comcast.net (96.110.32.94) 20.947 ms
  be-2413-pe13.350ecermak.il.ibone.comcast.net (96.110.32.98) 22.124 ms
  be-2404-pe04.350ecermak.il.ibone.comcast.net (96.110.37.46) 18.396 ms
8 75.149.231.238 (75.149.231.238) 21.321 ms
  96-87-9-226-static.hfc.comcastbusiness.net (96.87.9.226) 30.400 ms
  96-87-9-230-static.hfc.comcastbusiness.net (96.87.9.230) 23.835 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 66.076 ms 52.615 ms 44.961 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu

traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 18.862 ms 9.022 ms 9.090 ms
2 96.120.42.5 (96.120.42.5) 15.261 ms 14.061 ms 15.367 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 23.037 ms 13.023 ms 13.875 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 15.725 ms 12.638 ms 13.880 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 17.333 ms 23.213 ms 14.874 ms
```

6 be-32131-cs23.350ecermak.il.ibone.comcast.net (96.110.42.185) 22.389 ms
 be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 31.880 ms *

7 be-2404-pe04.350ecermak.il.ibone.comcast.net (96.110.37.46) 27.479 ms
 be-2411-pe11.350ecermak.il.ibone.comcast.net (96.110.33.206) 21.106 ms
 be-2303-pe03.350ecermak.il.ibone.comcast.net (96.110.37.26) 18.934 ms

8 75.149.231.2 (75.149.231.2) 22.832 ms
 75.149.231.238 (75.149.231.238) 18.413 ms
 66.208.233.90 (66.208.233.90) 20.722 ms

9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 42.976 ms 43.834 ms 45.340 ms
 saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15
 traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets

1 10.0.0.1 (10.0.0.1) 20.279 ms 6.718 ms 6.399 ms
 2 96.120.42.5 (96.120.42.5) 14.378 ms 16.157 ms 13.197 ms
 3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 15.007 ms 11.434 ms 14.123 ms
 4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 19.363 ms 16.906 ms 16.412 ms
 5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 14.612 ms 18.640 ms 35.445 ms
 6 be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 26.733 ms 25.504 ms 22.830 ms
 7 be-2104-pe04.350ecermak.il.ibone.comcast.net (96.110.37.34) 21.747 ms
 be-2211-pe11.350ecermak.il.ibone.comcast.net (96.110.33.198) 22.670 ms
 be-2204-pe04.350ecermak.il.ibone.comcast.net (96.110.37.38) 24.254 ms
 8 96.87-9-226-static.hfc.comcastbusiness.net (96.87.9.226) 24.784 ms
 66.208.233.218 (66.208.233.218) 23.396 ms
 50.208.235.174 (50.208.235.174) 23.405 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 51.506 ms 43.794 ms 42.136 ms
 saijoshithakathari@Sais-MacBook-Air ~ %

AUTONOMOUS SYSTEM NUMBER OR ISP FOR EACH ROUTER:

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.42.189

NetRange: 96.64.0.0 - 96.124.255.255
 CIDR: 96.64.0.0/11, 96.124.0.0/16, 96.112.0.0/13, 96.120.0.0/14, 96.96.0.0/12
 NetName: CABLE-1
 NetHandle: NET-96-64-0-0-1
 Parent: NET96 (NET-96-0-0-0-0)
 NetType: Direct Allocation
 OriginAS: AS7922
 Organization: Comcast Cable Communications, LLC (CCCS)
 RegDate: 2008-02-21
 Updated: 2021-01-25
 Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
 OrgName: Comcast Cable Communications, LLC
 OrgId: CCCS
 Address: 1800 Bishops Gate Blvd
 City: Mt Laurel
 StateProv: NJ
 PostalCode: 08054
 Country: US
 RegDate: 2001-09-18
 Updated: 2020-11-18
 Ref: <https://rdap.arin.net/registry/entity/CCCS>
 OrgAbuseHandle: NAPO-ARIN
 OrgAbuseName: Network Abuse and Policy Observance
 OrgAbusePhone: +1-888-565-4329

OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.42.181
NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.120.0.0/14, 96.112.0.0/13, 96.124.0.0/16, 96.64.0.0/11, 96.96.0.0/12
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 66.208.233.90

NetRange: 66.208.192.0 - 66.208.255.255
CIDR: 66.208.192.0/18
NetName: CBC-CM
NetHandle: NET-66-208-192-0-1
Parent: NET66 (NET-66-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2001-12-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/66.208.192.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 66.208.233.218

NetRange: 66.208.192.0 - 66.208.255.255
CIDR: 66.208.192.0/18
NetName: CBC-CM
NetHandle: NET-66-208-192-0-1
Parent: NET66 (NET-66-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2001-12-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/66.208.192.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ

PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %

DAY4

saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu

traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 11.107 ms 5.208 ms 5.210 ms
2 96.120.42.5 (96.120.42.5) 21.055 ms 18.313 ms 17.311 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 20.353 ms 15.614 ms 13.121 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 14.478 ms 15.852 ms 16.990 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 20.054 ms 15.485 ms 14.020 ms
6 be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 24.096 ms
  be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 31.595 ms
  be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 22.994 ms
7 be-2104-pe04.350ecermak.il.ibone.comcast.net (96.110.37.34) 20.338 ms
  be-2203-pe03.350ecermak.il.ibone.comcast.net (96.110.37.22) 22.276 ms
  be-2103-pe03.350ecermak.il.ibone.comcast.net (96.110.37.18) 28.503 ms
8 96-87-9-226-static.hfc.comcastbusiness.net (96.87.9.226) 19.571 ms
  66.208.233.218 (66.208.233.218) 23.872 ms
  96-87-9-230-static.hfc.comcastbusiness.net (96.87.9.230) 19.804 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 45.499 ms 47.853 ms 45.200 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15

traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 17.028 ms 6.531 ms 4.574 ms
2 96.120.42.5 (96.120.42.5) 19.523 ms 12.007 ms 15.439 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 13.679 ms 16.554 ms 13.594 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 38.562 ms 16.655 ms 17.158 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 36.894 ms 25.936 ms 19.400 ms
6 be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 22.443 ms 26.252 ms 25.370 ms
7 be-2111-pe11.350ecermak.il.ibone.comcast.net (96.110.33.194) 28.472 ms
  be-2413-pe13.350ecermak.il.ibone.comcast.net (96.110.32.98) 30.047 ms
  be-2104-pe04.350ecermak.il.ibone.comcast.net (96.110.37.34) 24.441 ms
8 50.208.235.170 (50.208.235.170) 24.709 ms
```

66.208.233.218 (66.208.233.218) 25.673 ms
 50.208.235.174 (50.208.235.174) 41.870 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 57.847 ms 42.083 ms 44.511 ms
 saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu
 traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets
 1 10.0.0.1 (10.0.0.1) 14.871 ms 5.066 ms 5.116 ms
 2 96.120.42.5 (96.120.42.5) 13.584 ms 12.931 ms 15.915 ms
 3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 11.382 ms 18.492 ms 17.471 ms
 4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 12.298 ms 15.560 ms 11.237 ms
 5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 17.371 ms 15.609 ms 13.498 ms
 6 * be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 44.337 ms *
 7 be-2303-pe03.350ecermak.il.ibone.comcast.net (96.110.37.26) 23.523 ms
 be-2411-pe11.350ecermak.il.ibone.comcast.net (96.110.33.206) 24.094 ms
 be-2404-pe04.350ecermak.il.ibone.comcast.net (96.110.37.46) 20.827 ms
 8 50.208.235.178 (50.208.235.178) 25.165 ms
 75.149.229.142 (75.149.229.142) 21.969 ms
 75.149.231.2 (75.149.231.2) 20.879 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 43.467 ms 43.486 ms 44.881 ms
 saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15
 traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets
 1 10.0.0.1 (10.0.0.1) 15.374 ms 4.478 ms 4.801 ms
 2 96.120.42.5 (96.120.42.5) 15.465 ms 14.196 ms 12.446 ms
 3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 12.505 ms 11.639 ms 15.103 ms
 4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 14.371 ms 13.016 ms 16.404 ms
 5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 18.301 ms 26.052 ms 14.426 ms
 6 be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 23.627 ms
 be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 23.795 ms *
 7 be-2413-pe13.350ecermak.il.ibone.comcast.net (96.110.32.98) 39.444 ms
 be-2104-pe04.350ecermak.il.ibone.comcast.net (96.110.37.34) 23.171 ms
 be-2304-pe04.350ecermak.il.ibone.comcast.net (96.110.37.42) 20.064 ms
 8 75.149.230.26 (75.149.230.26) 28.972 ms
 75.149.231.238 (75.149.231.238) 31.316 ms
 66.208.233.90 (66.208.233.90) 23.999 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 48.564 ms 43.087 ms 43.996 ms

AUTONOMOUS SYSTEM NUMBER OR ISP FOR EACH ROUTER:

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.37.22
 NetRange: 96.64.0.0 - 96.124.255.255
 CIDR: 96.112.0.0/13, 96.120.0.0/14, 96.96.0.0/12, 96.64.0.0/11, 96.124.0.0/16
 NetName: CABLE-1
 NetHandle: NET-96-64-0-0-1
 Parent: NET96 (NET-96-0-0-0-0)
 NetType: Direct Allocation
 OriginAS: AS7922
 Organization: Comcast Cable Communications, LLC (CCCS)
 RegDate: 2008-02-21
 Updated: 2021-01-25
 Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
 OrgName: Comcast Cable Communications, LLC
 OrgId: CCCS
 Address: 1800 Bishops Gate Blvd

City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.33.194
NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.96.0.0/12, 96.120.0.0/14, 96.64.0.0/11, 96.124.0.0/16, 96.112.0.0/13
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>

OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.42.181
NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.124.0.0/16, 96.96.0.0/12, 96.64.0.0/11, 96.120.0.0/14, 96.112.0.0/13
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.42.189
NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.120.0.0/14, 96.112.0.0/13, 96.124.0.0/16, 96.64.0.0/11, 96.96.0.0/12
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)

RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %

DAYS

saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu

traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 10.799 ms 9.333 ms 4.374 ms
2 96.120.42.5 (96.120.42.5) 14.697 ms 13.053 ms 65.708 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 18.713 ms 12.521 ms 16.803 ms
4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 16.322 ms 17.220 ms 17.708 ms
5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 21.052 ms 16.605 ms 14.968 ms
6 be-32141-cs24.350ecermak.il.ibone.comcast.net (96.110.42.189) 23.002 ms
  be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 26.206 ms 29.105 ms
7 be-2404-pe04.350ecermak.il.ibone.comcast.net (96.110.37.46) 27.096 ms
  be-2403-pe03.350ecermak.il.ibone.comcast.net (96.110.37.30) 20.879 ms
  be-2313-pe13.350ecermak.il.ibone.comcast.net (96.110.32.94) 27.883 ms
8 96-87-9-230-static.hfc.comcastbusiness.net (96.87.9.230) 23.863 ms
  75.149.231.238 (75.149.231.238) 23.426 ms
  66.208.233.90 (66.208.233.90) 27.002 ms
9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 45.225 ms 55.426 ms 46.634 ms
```

saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15

traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets

```
1 10.0.0.1 (10.0.0.1) 20.427 ms 5.942 ms 4.919 ms
2 96.120.42.5 (96.120.42.5) 14.606 ms 15.201 ms 15.839 ms
3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 16.900 ms 12.418 ms 12.010 ms
```

4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 14.461 ms 15.334 ms 16.528 ms
 5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 23.621 ms 18.334 ms 25.060 ms
 6 be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 25.371 ms *
 be-32131-cs23.350ecermak.il.ibone.comcast.net (96.110.42.185) 47.900 ms
 7 be-2403-pe03.350ecermak.il.ibone.comcast.net (96.110.37.30) 23.970 ms
 be-2404-pe04.350ecermak.il.ibone.comcast.net (96.110.37.46) 24.706 ms
 be-2111-pe11.350ecermak.il.ibone.comcast.net (96.110.33.194) 26.761 ms
 8 50.208.235.174 (50.208.235.174) 29.266 ms
 75.149.231.2 (75.149.231.2) 28.545 ms
 75.149.229.142 (75.149.229.142) 21.625 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 47.807 ms 55.912 ms 42.383 ms
 saijoshithakathari@Sais-MacBook-Air ~ %
 saijoshithakathari@Sais-MacBook-Air ~ % traceroute www.africau.edu
 traceroute to www.africau.edu (34.174.121.15), 64 hops max, 52 byte packets
 1 10.0.0.1 (10.0.0.1) 18.862 ms 9.022 ms 9.090 ms
 2 96.120.42.5 (96.120.42.5) 15.261 ms 14.061 ms 15.367 ms
 3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 23.037 ms 13.023 ms 13.875 ms
 4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 15.725 ms 12.638 ms 13.880 ms
 5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 17.333 ms 23.213 ms 14.874 ms
 6 be-32131-cs23.350ecermak.il.ibone.comcast.net (96.110.42.185) 22.389 ms
 be-32121-cs22.350ecermak.il.ibone.comcast.net (96.110.42.181) 31.880 ms *
 7 be-2404-pe04.350ecermak.il.ibone.comcast.net (96.110.37.46) 27.479 ms
 be-2411-pe11.350ecermak.il.ibone.comcast.net (96.110.33.206) 21.106 ms
 be-2303-pe03.350ecermak.il.ibone.comcast.net (96.110.37.26) 18.934 ms
 8 75.149.231.2 (75.149.231.2) 22.832 ms
 75.149.231.238 (75.149.231.238) 18.413 ms
 66.208.233.90 (66.208.233.90) 20.722 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 42.976 ms 43.834 ms 45.340 ms
 saijoshithakathari@Sais-MacBook-Air ~ % traceroute 34.174.121.15
 traceroute to 34.174.121.15 (34.174.121.15), 64 hops max, 52 byte packets
 1 10.0.0.1 (10.0.0.1) 20.279 ms 6.718 ms 6.399 ms
 2 96.120.42.5 (96.120.42.5) 14.378 ms 16.157 ms 13.197 ms
 3 po-301-1209-rur01.dearborn.mi.michigan.comcast.net (96.110.172.121) 15.007 ms 11.434 ms 14.123 ms
 4 po-1-rur02.dearborn.mi.michigan.comcast.net (68.85.223.14) 19.363 ms 16.906 ms 16.412 ms
 5 ae-60-ar01.pontiac.mi.michigan.comcast.net (68.87.190.29) 14.612 ms 18.640 ms 35.445 ms
 6 be-32111-cs21.350ecermak.il.ibone.comcast.net (96.110.42.177) 26.733 ms 25.504 ms 22.830 ms
 7 be-2104-pe04.350ecermak.il.ibone.comcast.net (96.110.37.34) 21.747 ms
 be-2211-pe11.350ecermak.il.ibone.comcast.net (96.110.33.198) 22.670 ms
 be-2204-pe04.350ecermak.il.ibone.comcast.net (96.110.37.38) 24.254 ms
 8 96.87.9.226-static.hfc.comcastbusiness.net (96.87.9.226) 24.784 ms
 66.208.233.218 (66.208.233.218) 23.396 ms
 50.208.235.174 (50.208.235.174) 23.405 ms
 9 15.121.174.34.bc.googleusercontent.com (34.174.121.15) 51.506 ms 43.794 ms 42.136 ms

AUTONOMOUS SYSTEM NUMBER OR ISP FOR EACH ROUTER:

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.42.181

NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.120.0.0/14, 96.124.0.0/16, 96.112.0.0/13, 96.96.0.0/12, 96.64.0.0/11
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-Ip-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.42.185

NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.124.0.0/16, 96.112.0.0/13, 96.96.0.0/12, 96.120.0.0/14, 96.64.0.0/11
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel

StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %

saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.37.46
NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.120.0.0/14, 96.112.0.0/13, 96.124.0.0/16, 96.96.0.0/12, 96.64.0.0/11
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300

OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ % whois -h whois.arin.net 96.110.37.34
NetRange: 96.64.0.0 - 96.124.255.255
CIDR: 96.96.0.0/12, 96.64.0.0/11, 96.112.0.0/13, 96.124.0.0/16, 96.120.0.0/14
NetName: CABLE-1
NetHandle: NET-96-64-0-0-1
Parent: NET96 (NET-96-0-0-0-0)
NetType: Direct Allocation
OriginAS: AS7922
Organization: Comcast Cable Communications, LLC (CCCS)
RegDate: 2008-02-21
Updated: 2021-01-25
Ref: <https://rdap.arin.net/registry/ip/96.64.0.0>
OrgName: Comcast Cable Communications, LLC
OrgId: CCCS
Address: 1800 Bishops Gate Blvd
City: Mt Laurel
StateProv: NJ
PostalCode: 08054
Country: US
RegDate: 2001-09-18
Updated: 2020-11-18
Ref: <https://rdap.arin.net/registry/entity/CCCS>
OrgTechHandle: IC161-ARIN
OrgTechName: Comcast Cable Communications Inc
OrgTechPhone: +1-856-792-2300
OrgTechEmail: CNIPEO-lp-registration@cable.comcast.com
OrgTechRef: <https://rdap.arin.net/registry/entity/IC161-ARIN>
OrgAbuseHandle: NAPO-ARIN
OrgAbuseName: Network Abuse and Policy Observance
OrgAbusePhone: +1-888-565-4329
OrgAbuseEmail: abuse@comcast.net
OrgAbuseRef: <https://rdap.arin.net/registry/entity/NAPO-ARIN>
OrgRoutingHandle: ROUTI25-ARIN
OrgRoutingName: Routing
OrgRoutingPhone: +1-856-792-2300
OrgRoutingEmail: routing@comcast.com
OrgRoutingRef: <https://rdap.arin.net/registry/entity/ROUTI25-ARIN>
saijoshithakathari@Sais-MacBook-Air ~ %