In [1]:
```
import pandas as pd
import numpy as np
from numpy import nan
import seaborn as sns
import matplotlib.pyplot as plt
from scipy import stats
```

In [2]:
```
trdf=pd.read_pickle("traceroute_final.ta.pkl")
di=pd.read_csv('https://projectbismark.net:8080/bismark/status/wsj/f6d25a080a/tr/devinfo1.csv') #device information(di)
```

In [3]:
```
###############
##### All data necessary for answering the questions should be in the trdf (TraceRoute DataFrame) and di (device info)
##############
di_dict=di.set_index('sid').T.to_dict()
trdf.tail()
```

Out[3]:

	City	DestHost	DestHostISP	DestHostLocation	DeviceISP	DeviceLocat
81563	[Local:192.168.143.1, Local:192.168.1.1, Local...	52.5.61.180	Amazon.com	Ashburn	Verizon Fios	
81564	[Local:192.168.143.1, Local:192.168.1.1, Local...	52.4.166.237	Amazon.com	Ashburn	Verizon Fios	
81565	[Local:192.168.143.1, Local:192.168.1.1, Local...	52.21.45.48	Amazon.com	Ashburn	Verizon Fios	
81566	[Local:192.168.143.1, Local:192.168.1.1, nan, ...	54.164.225.9	Amazon	Ashburn	Verizon Fios	
81567	[Local:192.168.143.1, Local:192.168.1.1, nan, ...	8.8.8.8	Google	NaN	Verizon Fios	

5 rows × 23 columns

In [4]:
```
di_dict
```

Out[4]:

```
{'test_1521': {'Unnamed: 0': 0,
  'bid': 'PI001E063557EB',
  'city_x': 'nyc',
  'ip': '209.150.50.142',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-05-12',
  'timels': '09:51:01',
  'status': 'down',
  'city_y': 'New York',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.7503,
  'long': -74.0014,
  'isp': 'RCN',
  'org': 'RCN',
  'domain': 'rcncustomer.com',
  'ASorg': 'RCN',
  'hits': nan},
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  'ip': '173.68.99.182',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-01-11',
  'timels': '01:43:08',
  'status': 'down',
  'city_y': 'New York',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.7503,
  'long': -74.0014,
  'isp': 'Verizon Fios',
  'org': 'Verizon Fios',
  'domain': 'verizon.net',
  'ASorg': 'MCI Communications Services Inc. d/b/a Verizon Business',
  'hits': nan},
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  'ip': '99.168.102.149',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-15',
  'timels': '18:02:24',
  'status': 'down',
  'city_y': 'Arlington',
  'state': 'TX',
  'country_y': 'US',
  'lat': 32.6548,
  'long': -97.092,
  'isp': 'AT&T U-verse',
  'org': 'AT&T U-verse',
  'domain': 'sbcglobal.net',
  'ASorg': 'AT&T Services  Inc.',
  'hits': nan},
```

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  'v': 612,
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  'timels': '14:53:02',
  'status': 'down',
  'city_y': 'San Francisco',
  'state': 'CA',
  'country_y': 'US',
  'lat': 37.8007,
  'long': -122.4097,
  'isp': 'AT&T U-verse',
  'org': 'AT&T U-verse',
  'domain': 'sbcglobal.net',
  'ASorg': 'AT&T Services  Inc.',
  'hits': nan},
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  'country_x': 'US',
  'v': 612,
  'datels': '2019-04-16',
  'timels': '01:15:02',
  'status': 'down',
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  'state': 'NY',
  'country_y': 'US',
  'lat': 41.4535,
  'long': -74.4774,
  'isp': 'Frontier Communications',
  'org': 'Frontier Communications',
  'domain': nan,
  'ASorg': 'Frontier Communications of America  Inc.',
  'hits': nan},
 'test_4491': {'Unnamed: 0': 5,
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  'ip': '67.186.99.14',
  'country_x': 'US',
  'v': 612,
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  'timels': '07:26:13',
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  'state': 'IL',
  'country_y': 'US',
  'lat': 41.9409,
  'long': -87.6532,
  'isp': 'Comcast Cable',
  'org': 'Comcast Cable',
  'domain': 'comcast.net',
  'ASorg': 'Comcast Cable Communications  LLC',
  'hits': nan},
```

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 'v': 612,
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 'timels': '03:21:19',
 'status': 'up',
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 'state': 'NJ',
 'country_y': 'US',
 'lat': 40.7305,
 'long': -74.4017,
 'isp': 'Optimum Online',
 'org': 'Optimum Online',
 'domain': 'optonline.net',
 'ASorg': 'Cablevision Systems Corp.',
 'hits': nan},
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 'country_x': 'US',
 'v': 612,
 'datels': '2019-06-19',
 'timels': '03:21:22',
 'status': 'up',
 'city_y': 'Rochester',
 'state': 'MI',
 'country_y': 'US',
 'lat': 42.7262,
 'long': -83.1566,
 'isp': 'AT&T U-verse',
 'org': 'AT&T U-verse',
 'domain': 'sbcglobal.net',
 'ASorg': 'AT&T Services Inc.',
 'hits': nan},
'test_4818': {'Unnamed: 0': 8,
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 'country_x': 'US',
 'v': 612,
 'datels': '2019-03-27',
 'timels': '14:26:23',
 'status': 'down',
 'city_y': 'Houston',
 'state': 'TX',
 'country_y': 'US',
 'lat': 29.7912,
 'long': -95.4182,
 'isp': 'AT&T U-verse',
 'org': 'AT&T U-verse',
 'domain': 'sbcglobal.net',
 'ASorg': 'AT&T Services  Inc.',
 'hits': nan},
```

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  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:20',
  'status': 'up',
  'city_y': 'Chicago',
  'state': 'IL',
  'country_y': 'US',
  'lat': 41.9555,
  'long': -87.6613,
  'isp': 'RCN',
  'org': 'RCN',
  'domain': 'rcncustomer.com',
  'ASorg': 'RCN',
  'hits': nan},
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  'v': 612,
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  'timels': '03:21:25',
  'status': 'up',
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  'state': 'MI',
  'country_y': 'US',
  'lat': 42.4586,
  'long': -83.1363,
  'isp': 'AT&T U-verse',
  'org': 'AT&T U-verse',
  'domain': 'sbcglobal.net',
  'ASorg': 'AT&T Services Inc.',
  'hits': nan},
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  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:02',
  'status': 'up',
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  'state': 'VA',
  'country_y': 'US',
  'lat': 38.928,
  'long': -77.2649,
  'isp': 'Verizon Fios',
  'org': 'Verizon Fios',
  'domain': 'verizon.net',
  'ASorg': 'MCI Communications Services Inc. d/b/a Verizon Business',
  'hits': nan},
```

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 'v': 612,
 'datels': '2019-05-01',
 'timels': '02:42:11',
 'status': 'down',
 'city_y': 'Los Angeles',
 'state': 'CA',
 'country_y': 'US',
 'lat': 34.106,
 'long': -118.3607,
 'isp': 'AT&T U-verse',
 'org': 'AT&T U-verse',
 'domain': 'sbcglobal.net',
 'ASorg': 'AT&T Services  Inc.',
 'hits': nan},
nan: {'Unnamed: 0': 13,
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 'city_x': 'san francisco',
 'ip': '73.71.143.87',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-04-20',
 'timels': '19:07:17',
 'status': 'down',
 'city_y': 'San Francisco',
 'state': 'CA',
 'country_y': 'US',
 'lat': 37.7958,
 'long': -122.4203,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications  LLC',
 'hits': nan},
'test_5746': {'Unnamed: 0': 14,
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 'country_x': 'US',
 'v': 612,
 'datels': '2019-04-28',
 'timels': '20:42:16',
 'status': 'down',
 'city_y': 'Gwynn Oak',
 'state': 'MD',
 'country_y': 'US',
 'lat': 39.3296,
 'long': -76.7341,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications  LLC',
 'hits': nan},
```

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  'v': 612,
  'datels': '2019-01-17',
  'timels': '01:42:02',
  'status': 'down',
  'city_y': 'Washington',
  'state': 'DC',
  'country_y': 'US',
  'lat': 38.9379,
  'long': -77.0859,
  'isp': 'Comcast Cable',
  'org': 'Comcast Cable',
  'domain': 'comcast.net',
  'ASorg': 'Comcast Cable Communications  LLC',
  'hits': nan},
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  'country_x': 'US',
  'v': 612,
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  'timels': '03:20:31',
  'status': 'up',
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  'state': 'NY',
  'country_y': 'US',
  'lat': 40.7009,
  'long': -73.9461,
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  'org': 'Spectrum',
  'domain': 'rr.com',
  'ASorg': 'Charter Communications Inc',
  'hits': nan},
 'test_4727': {'Unnamed: 0': 17,
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  'v': 612,
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  'timels': '03:21:26',
  'status': 'up',
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  'state': 'CA',
  'country_y': 'US',
  'lat': 34.113,
  'long': -118.1888,
  'isp': 'Spectrum',
  'org': 'Spectrum',
  'domain': 'rr.com',
  'ASorg': 'Charter Communications Inc',
  'hits': nan},
```

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 'country_x': 'US',
 'v': 612,
 'datels': '2019-05-07',
 'timels': '13:43:28',
 'status': 'down',
 'city_y': 'Wingdale',
 'state': 'NY',
 'country_y': 'US',
 'lat': 41.6538,
 'long': -73.5556,
 'isp': 'Optimum Online',
 'org': 'Optimum Online',
 'domain': 'optonline.net',
 'ASorg': 'Cablevision Systems Corp.',
 'hits': nan},
'test_1464': {'Unnamed: 0': 19,
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 'ip': '24.42.80.73',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-06-19',
 'timels': '03:21:16',
 'status': 'up',
 'city_y': 'Brooklyn',
 'state': 'NY',
 'country_y': 'US',
 'lat': 40.6643,
 'long': -73.9763,
 'isp': 'Windstream Communications',
 'org': 'Windstream Communications',
 'domain': nan,
 'ASorg': 'Charter Communications Inc',
 'hits': nan},
'test_6318': {'Unnamed: 0': 20,
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 'ip': '73.150.47.82',
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 'v': 612,
 'datels': '2019-05-30',
 'timels': '15:41:21',
 'status': 'down',
 'city_y': 'Willingboro',
 'state': 'NJ',
 'country_y': 'US',
 'lat': 40.0296,
 'long': -74.8834,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications  LLC',
 'hits': nan},
```

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 'v': 612,
 'datels': '2019-05-20',
 'timels': '13:46:10',
 'status': 'down',
 'city_y': 'Washington',
 'state': 'DC',
 'country_y': 'US',
 'lat': 38.9775,
 'long': -77.0279,
 'isp': 'Verizon Internet Services',
 'org': 'Verizon Internet Services',
 'domain': 'verizon.net',
 'ASorg': 'MCI Communications Services  Inc. d/b/a Verizon Business',
 'hits': nan},
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 'ip': '100.37.198.106',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-06-19',
 'timels': '03:21:11',
 'status': 'up',
 'city_y': 'Rockville Centre',
 'state': 'NY',
 'country_y': 'US',
 'lat': 40.6637,
 'long': -73.638,
 'isp': 'Verizon Fios',
 'org': 'Verizon Fios',
 'domain': 'verizon.net',
 'ASorg': 'MCI Communications Services Inc. d/b/a Verizon Business',
 'hits': nan},
'test_1786': {'Unnamed: 0': 23,
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 'v': 612,
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 'timels': '03:21:23',
 'status': 'up',
 'city_y': 'Los Angeles',
 'state': 'CA',
 'country_y': 'US',
 'lat': 34.11,
 'long': -118.2607,
 'isp': 'Spectrum',
 'org': 'Spectrum',
 'domain': 'rr.com',
 'ASorg': 'Charter Communications Inc',
 'hits': nan},
```

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  'ip': '184.164.168.149',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-05-05',
  'timels': '16:33:03',
  'status': 'down',
  'city_y': 'Miami Beach',
  'state': 'FL',
  'country_y': 'US',
  'lat': 25.7907,
  'long': -80.13,
  'isp': 'Atlantic Broadband',
  'org': 'Atlantic Broadband',
  'domain': 'atlanticbb.net',
  'ASorg': 'Atlantic Broadband Finance  LLC',
  'hits': nan},
 'test_4287': {'Unnamed: 0': 25,
  'bid': 'PIB827EBDF6477',
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  'ip': '69.47.79.143',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:17',
  'status': 'up',
  'city_y': 'Park Ridge',
  'state': 'IL',
  'country_y': 'US',
  'lat': 42.0094,
  'long': -87.8354,
  'isp': 'WideOpenWest',
  'org': 'WideOpenWest',
  'domain': 'wideopenwest.com',
  'ASorg': 'WideOpenWest Finance LLC',
  'hits': nan},
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  'ip': '69.117.210.216',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-01',
  'timels': '19:59:23',
  'status': 'down',
  'city_y': 'Brooklyn',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.6763,
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  'isp': 'Optimum Online',
  'org': 'Optimum Online',
  'domain': 'optonline.net',
  'ASorg': 'Cablevision Systems Corp.',
  'hits': nan},
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 'timels': '12:55:04',
 'status': 'down',
 'city_y': 'North Brunswick',
 'state': 'NJ',
 'country_y': 'US',
 'lat': 40.4551,
 'long': -74.4871,
 'isp': 'Optimum Online',
 'org': 'Optimum Online',
 'domain': 'optonline.net',
 'ASorg': 'Cablevision Systems Corp.',
 'hits': nan},
'test_2580': {'Unnamed: 0': 28,
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 'ip': '24.187.155.191',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-05-17',
 'timels': '00:50:05',
 'status': 'down',
 'city_y': 'Hartsdale',
 'state': 'NY',
 'country_y': 'US',
 'lat': 41.0197,
 'long': -73.8074,
 'isp': 'Optimum Online',
 'org': 'Optimum Online',
 'domain': 'optonline.net',
 'ASorg': 'Cablevision Systems Corp.',
 'hits': nan},
'test_2100': {'Unnamed: 0': 29,
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 'ip': '72.79.23.205',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-06-19',
 'timels': '03:21:26',
 'status': 'up',
 'city_y': 'Bloomfield',
 'state': 'NJ',
 'country_y': 'US',
 'lat': 40.8022,
 'long': -74.1914,
 'isp': 'Verizon Internet Services',
 'org': 'Verizon Internet Services',
 'domain': 'verizon.net',
 'ASorg': 'MCI Communications Services Inc. d/b/a Verizon Business',
 'hits': nan},
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 'bid': 'PI001E06347FAE',
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 'country_x': 'US',
 'v': 612,
 'datels': '2019-04-16',
 'timels': '15:22:11',
 'status': 'down',
 'city_y': 'Glenside',
 'state': 'PA',
 'country_y': 'US',
 'lat': 40.1101,
 'long': -75.1567,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications  LLC',
 'hits': nan},
'test_5238': {'Unnamed: 0': 31,
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 'city_x': 'houston',
 'ip': '73.77.14.238',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-03-31',
 'timels': '01:38:23',
 'status': 'down',
 'city_y': 'Spring',
 'state': 'TX',
 'country_y': 'US',
 'lat': 30.0409,
 'long': -95.5302,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications  LLC',
 'hits': nan},
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 'city_x': 'dc',
 'ip': '69.250.210.25',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-06-19',
 'timels': '03:21:15',
 'status': 'up',
 'city_y': 'Washington',
 'state': 'DC',
 'country_y': 'US',
 'lat': 38.9034,
 'long': -76.9882,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications',
 'hits': nan},
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 'v': 612,
 'datels': '2019-03-14',
 'timels': '15:20:29',
 'status': 'down',
 'city_y': 'Houston',
 'state': 'TX',
 'country_y': 'US',
 'lat': 29.7223,
 'long': -95.6285,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications  LLC',
 'hits': nan},
'test_7965': {'Unnamed: 0': 34,
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 'city_x': 'chicago',
 'ip': '67.175.224.194',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-04-13',
 'timels': '13:08:23',
 'status': 'down',
 'city_y': 'Chicago',
 'state': 'IL',
 'country_y': 'US',
 'lat': 42.0096,
 'long': -87.6928,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications  LLC',
 'hits': nan},
'test_4404': {'Unnamed: 0': 35,
 'bid': 'PI001E0635566E',
 'city_x': 'dc area',
 'ip': '108.48.89.7',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-03-31',
 'timels': '03:20:10',
 'status': 'down',
 'city_y': 'Silver Spring',
 'state': 'MD',
 'country_y': 'US',
 'lat': 39.037,
 'long': -77.0412,
 'isp': 'Verizon Fios',
 'org': 'Verizon Fios',
 'domain': 'verizon.net',
 'ASorg': 'MCI Communications Services  Inc. d/b/a Verizon Business',
 'hits': nan},
```

```
 'test_8265': {'Unnamed: 0': 36,
  'bid': 'PI001E0633EA74',
  'city_x': 'nyc',
  'ip': '74.71.139.70',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-05-11',
  'timels': '16:38:02',
  'status': 'down',
  'city_y': 'Brooklyn',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.6643,
  'long': -73.9763,
  'isp': 'Spectrum',
  'org': 'Spectrum',
  'domain': 'rr.com',
  'ASorg': 'Charter Communications Inc',
  'hits': nan},
 'test_1048': {'Unnamed: 0': 37,
  'bid': 'PI001E063479D3',
  'city_x': 'la',
  'ip': '104.35.229.154',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:26',
  'status': 'up',
  'city_y': 'Los Angeles',
  'state': 'CA',
  'country_y': 'US',
  'lat': 34.1004,
  'long': -118.2946,
  'isp': 'Spectrum',
  'org': 'Spectrum',
  'domain': 'rr.com',
  'ASorg': 'Charter Communications Inc',
  'hits': nan},
 'test_1802': {'Unnamed: 0': 38,
  'bid': 'PI001E063559B1',
  'city_x': 'NY area',
  'ip': '69.112.124.154',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:21',
  'status': 'up',
  'city_y': 'Brooklyn',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.6955,
  'long': -73.9667,
  'isp': 'Optimum Online',
  'org': 'Optimum Online',
  'domain': 'optonline.net',
  'ASorg': 'Cablevision Systems Corp.',
  'hits': nan},
```

```
 'test_1374': {'Unnamed: 0': 39,
  'bid': 'PI001E063557FE',
  'city_x': 'ny area',
  'ip': '68.193.40.167',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:26',
  'status': 'up',
  'city_y': 'Port Washington',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.8344,
  'long': -73.7008,
  'isp': 'Optimum Online',
  'org': 'Optimum Online',
  'domain': 'optonline.net',
  'ASorg': 'Cablevision Systems Corp.',
  'hits': nan},
 'test_4654': {'Unnamed: 0': 40,
  'bid': 'PI001E0635589F',
  'city_x': 'north carolina',
  'ip': '107.13.240.9',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-06',
  'timels': '09:28:10',
  'status': 'down',
  'city_y': 'Raleigh',
  'state': 'NC',
  'country_y': 'US',
  'lat': 35.7908,
  'long': -78.653,
  'isp': 'Spectrum',
  'org': 'Spectrum',
  'domain': 'rr.com',
  'ASorg': 'Charter Communications Inc',
  'hits': nan},
 'test_1164': {'Unnamed: 0': 41,
  'bid': 'PI001E06347A4F',
  'city_x': 'pittsburgh',
  'ip': '73.154.247.151',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:21',
  'status': 'up',
  'city_y': 'Pittsburgh',
  'state': 'PA',
  'country_y': 'US',
  'lat': 40.4324,
  'long': -79.9247,
  'isp': 'Comcast Cable',
  'org': 'Comcast Cable',
  'domain': 'comcast.net',
  'ASorg': 'Comcast Cable Communications',
  'hits': nan},
```

```
 'test_4151': {'Unnamed: 0': 42,
  'bid': 'PI001E06347F5A',
  'city_x': 'nyc',
  'ip': '68.193.35.157',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-03-14',
  'timels': '19:02:51',
  'status': 'down',
  'city_y': 'Norwalk',
  'state': 'CT',
  'country_y': 'US',
  'lat': 41.1014,
  'long': -73.4011,
  'isp': 'Optimum Online',
  'org': 'Optimum Online',
  'domain': 'optonline.net',
  'ASorg': 'Cablevision Systems Corp.',
  'hits': nan},
 'test_7107': {'Unnamed: 0': 43,
  'bid': 'PI001E06360D9F',
  'city_x': 'westchester',
  'ip': '184.152.35.215',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-04-20',
  'timels': '23:17:01',
  'status': 'down',
  'city_y': 'Brooklyn',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.6208,
  'long': -74.0426,
  'isp': 'Spectrum',
  'org': 'Spectrum',
  'domain': 'rr.com',
  'ASorg': 'Charter Communications Inc',
  'hits': nan},
 'test_5124': {'Unnamed: 0': 44,
  'bid': 'PI001E06361251',
  'city_x': 'nyc',
  'ip': '68.196.142.23',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:21',
  'status': 'up',
  'city_y': 'Peekskill',
  'state': 'NY',
  'country_y': 'US',
  'lat': 41.2892,
  'long': -73.9184,
  'isp': 'Optimum Online',
  'org': 'Optimum Online',
  'domain': 'optonline.net',
  'ASorg': 'Cablevision Systems Corp.',
  'hits': nan},
```

```
 'test_6215': {'Unnamed: 0': 45,
  'bid': 'PI001E063559B2',
  'city_x': 'nyc',
  'ip': '24.188.179.48',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-16',
  'timels': '20:37:26',
  'status': 'down',
  'city_y': 'Brooklyn',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.6763,
  'long': -73.9492,
  'isp': 'Optimum Online',
  'org': 'Optimum Online',
  'domain': 'optonline.net',
  'ASorg': 'Cablevision Systems Corp.',
  'hits': nan},
 'test_1962': {'Unnamed: 0': 46,
  'bid': 'PI001E063558AB',
  'city_x': 'san francisco',
  'ip': '99.155.33.246',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:20:51',
  'status': 'up',
  'city_y': 'Emeryville',
  'state': 'CA',
  'country_y': 'US',
  'lat': 37.8371,
  'long': -122.2773,
  'isp': 'AT&T U-verse',
  'org': 'AT&T U-verse',
  'domain': 'sbcglobal.net',
  'ASorg': 'AT&T Services Inc.',
  'hits': nan},
 'test_6146': {'Unnamed: 0': 47,
  'bid': 'PI001E063557EB',
  'city_x': 'nyc',
  'ip': '209.150.50.142',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-05-12',
  'timels': '09:51:01',
  'status': 'down',
  'city_y': 'Woodside',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.7465,
  'long': -73.90899999999998,
  'isp': 'RCN',
  'org': 'RCN',
  'domain': 'rcncustomer.com',
  'ASorg': 'RCN',
  'hits': nan},
```

```
'test_5689': {'Unnamed: 0': 48,
 'bid': 'PI001E0635566A',
 'city_x': 'seattle',
 'ip': '67.170.43.64',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-04-08',
 'timels': '22:37:02',
 'status': 'down',
 'city_y': 'Seattle',
 'state': 'WA',
 'country_y': 'US',
 'lat': 47.7467,
 'long': -122.3686,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications  LLC',
 'hits': nan},
'test_2787': {'Unnamed: 0': 49,
 'bid': 'PI001E0635584F',
 'city_x': 'san francisco',
 'ip': '136.24.141.59',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-01-26',
 'timels': '19:07:03',
 'status': 'down',
 'city_y': 'San Francisco',
 'state': 'CA',
 'country_y': 'US',
 'lat': 37.7771,
 'long': -122.406,
 'isp': 'Webpass',
 'org': 'Webpass',
 'domain': 'in-addr.arpa',
 'ASorg': 'Webpass Inc.',
 'hits': nan},
'test_3540': {'Unnamed: 0': 50,
 'bid': 'PI001E06360E07',
 'city_x': 'nyc',
 'ip': '173.56.37.213',
 'country_x': 'US',
 'v': 612,
 'datels': '2018-12-09',
 'timels': '03:20:01',
 'status': 'down',
 'city_y': 'New York',
 'state': 'NY',
 'country_y': 'US',
 'lat': 40.7503,
 'long': -74.0014,
 'isp': 'Verizon Fios',
 'org': 'Verizon Fios',
 'domain': 'verizon.net',
 'ASorg': 'MCI Communications Services  Inc. d/b/a Verizon Business',
 'hits': nan},
```

```
 'test_1769': {'Unnamed: 0': 51,
  'bid': 'PI001E0636088D',
  'city_x': 'dc',
  'ip': '100.36.49.213',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-06-19',
  'timels': '03:21:03',
  'status': 'up',
  'city_y': 'Washington',
  'state': 'DC',
  'country_y': 'US',
  'lat': 38.9034,
  'long': -76.9882,
  'isp': 'Verizon Fios',
  'org': 'Verizon Fios',
  'domain': 'verizon.net',
  'ASorg': 'MCI Communications Services  Inc. d/b/a Verizon Business',
  'hits': nan},
 'test_1166': {'Unnamed: 0': 52,
  'bid': 'PI001E06355477',
  'city_x': 'jersey city',
  'ip': '100.8.222.76',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-04-28',
  'timels': '15:47:35',
  'status': 'down',
  'city_y': 'Jersey City',
  'state': 'NJ',
  'country_y': 'US',
  'lat': 40.734,
  'long': -74.0712,
  'isp': 'Verizon Fios',
  'org': 'Verizon Fios',
  'domain': 'verizon.net',
  'ASorg': 'MCI Communications Services  Inc. d/b/a Verizon Business',
  'hits': nan},
 'test_1267': {'Unnamed: 0': 53,
  'bid': 'PI001E06360E09',
  'city_x': 'nyc',
  'ip': '65.78.9.191',
  'country_x': 'US',
  'v': 612,
  'datels': '2019-03-28',
  'timels': '21:45:30',
  'status': 'down',
  'city_y': 'New York',
  'state': 'NY',
  'country_y': 'US',
  'lat': 40.76300000000001,
  'long': -73.9926,
  'isp': 'RCN',
  'org': 'RCN',
  'domain': 'rcncustomer.com',
  'ASorg': 'RCN',
  'hits': nan},
```

```
'test_1666': {'Unnamed: 0': 53,
 'bid': 'PI001E063559B3',
 'city_x': 'new jersey',
 'ip': '72.78.189.201',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-04-12',
 'timels': '21:33:20',
 'status': 'down',
 'city_y': 'Morrisville',
 'state': 'PA',
 'country_y': 'US',
 'lat': 40.2104,
 'long': -74.8278,
 'isp': 'Verizon Fios',
 'org': 'Verizon Fios',
 'domain': 'verizon.net',
 'ASorg': 'MCI Communications Services  Inc. d/b/a Verizon Business',
 'hits': nan},
'test_7384': {'Unnamed: 0': 54,
 'bid': 'PI001E06356B8B',
 'city_x': 'nyc',
 'ip': '209.122.112.59',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-03-13',
 'timels': '00:15:09',
 'status': 'down',
 'city_y': 'New York',
 'state': 'NY',
 'country_y': 'US',
 'lat': 40.7683,
 'long': -73.9802,
 'isp': 'RCN',
 'org': 'RCN',
 'domain': 'rcncustomer.com',
 'ASorg': 'RCN',
 'hits': nan},
'test_4302': {'Unnamed: 0': 55,
 'bid': 'PIB827EBD74296',
 'city_x': nan,
 'ip': '69.136.235.218',
 'country_x': 'US',
 'v': 612,
 'datels': '2019-06-19',
 'timels': '03:21:26',
 'status': 'up',
 'city_y': 'Washington',
 'state': 'DC',
 'country_y': 'US',
 'lat': 38.9172,
 'long': -77.0709,
 'isp': 'Comcast Cable',
 'org': 'Comcast Cable',
 'domain': 'comcast.net',
 'ASorg': 'Comcast Cable Communications LLC',
 'hits': nan}}
```

In [5]:
```
# All cities resolved by MaxMind
trdf_allresolved=trdf[trdf.PercentOfUnresolvedCities == 0.0]
```

In [6]:
```
#Numbers looks good, total of 4660 something...
trdf_allresolved.groupby(["id","DeviceLocationY", "Meta"]).size().sort_values(ascending=False)
```

Out[6]:

id	DeviceLocationY	Meta	
test_4287	Park Ridge	Amazon	877
test_3515	Chicago	Amazon	793
test_7107	Brooklyn	Amazon	460
test_4287	Park Ridge	Cloudfront CDN	413
test_1521	New York	Netflix	385
test_7107	Brooklyn	Cloudfront CDN	287
test_9892	Brooklyn	Amazon	226
test_7107	Brooklyn	Netflix	170
test_9892	Brooklyn	Cloudfront CDN	161
test_3515	Chicago	Sling TV	114
		Youtube	102
test_1521	New York	Amazon	79
test_8265	Brooklyn	Amazon	77
test_3515	Chicago	Netflix	67
test_9892	Brooklyn	Hulu	58
test_4287	Park Ridge	Youtube	45
test_8265	Brooklyn	Netflix	45
test_3515	Chicago	Cloudfront CDN	40
test_4287	Park Ridge	Netflix	32
test_7107	Brooklyn	HBO	27
		Hulu	24
test_1521	New York	Cloudfront CDN	18
test_1549	Los Angeles	Hulu	16
test_8265	Brooklyn	Cloudfront CDN	15
test_1521	New York	Hulu	15
test_1549	Los Angeles	HBO	13
test_1464	Brooklyn	Amazon	13
		Netflix	13
test_1549	Los Angeles	Facebook	12
test_1464	Brooklyn	HBO	11
test_3515	Chicago	Facebook	8
test_9892	Brooklyn	Netflix	7
test_1549	Los Angeles	Netflix	6
test_9892	Brooklyn	Spotify	4
test_8265	Brooklyn	Hulu	4
test_9892	Brooklyn	HBO	4
test_3515	Chicago	Spotify	3
test_1521	New York	Youtube	3
test_5689	Seattle	Amazon	2
test_1521	New York	Facebook	2
test_7107	Brooklyn	Spotify	2
test_1166	Jersey City	Hulu	2
test_1622	San Francisco	Cloudfront CDN	1
test_1549	Los Angeles	Cloudfront CDN	1
test_5826	Arlington	Amazon	1
		Netflix	1
test_5838	North Brunswick	Amazon	1
test_6445	Washington	Cloudfront CDN	1

dtype: int64

In [7]:
```
#Not sure if I'd have to use the provided location or MaxMind resolved location
trdf_allresolved.groupby(["id","DeviceLocation", "Meta"]).size().sort_values(ascending=False)
```

Out[7]:
```
id         DeviceLocation  Meta
test_4287  chicago area    Amazon            877
test_3515  chicago area    Amazon            793
test_7107  westchester     Amazon            460
test_4287  chicago area    Cloudfront CDN    413
test_1521  nyc             Netflix           385
test_7107  westchester     Cloudfront CDN    287
test_9892  nyc             Amazon            226
test_7107  westchester     Netflix           170
test_9892  nyc             Cloudfront CDN    161
test_3515  chicago area    Sling TV          114
                           Youtube           102
test_1521  nyc             Amazon             79
test_8265  nyc             Amazon             77
test_3515  chicago area    Netflix            67
test_9892  nyc             Hulu               58
test_4287  chicago area    Youtube            45
test_8265  nyc             Netflix            45
test_3515  chicago area    Cloudfront CDN     40
test_4287  chicago area    Netflix            32
test_7107  westchester     HBO                27
                           Hulu               24
test_1521  nyc             Cloudfront CDN     18
test_1549  los angeles     Hulu               16
test_8265  nyc             Cloudfront CDN     15
test_1521  nyc             Hulu               15
test_1549  los angeles     HBO                13
test_1464  nyc             Amazon             13
                           Netflix            13
test_1549  los angeles     Facebook           12
test_1464  nyc             HBO                11
test_3515  chicago area    Facebook            8
test_9892  nyc             Netflix             7
test_1549  los angeles     Netflix             6
test_9892  nyc             Spotify             4
test_8265  nyc             Hulu                4
test_9892  nyc             HBO                 4
test_3515  chicago area    Spotify             3
test_1521  nyc             Youtube             3
test_5689  seattle         Amazon              2
test_1521  nyc             Facebook            2
test_7107  westchester     Spotify             2
test_1166  jersey city     Hulu                2
test_1622  san francisco   Cloudfront CDN      1
test_1549  los angeles     Cloudfront CDN      1
test_5826  dallas          Amazon              1
                           Netflix             1
test_5838  new jersey      Amazon              1
test_6445  washington dc   Cloudfront CDN      1
dtype: int64
```

In [8]:
```
trdf_allresolved.head()
```

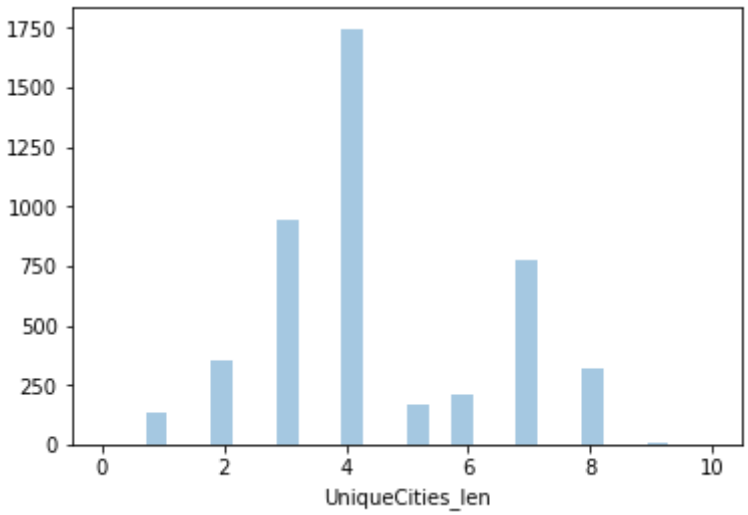
Out[8]:

	City	DestHost	DestHostISP	DestHostLocation	DeviceISP	DeviceLoc
1357	[Local:192.168.143.1, Local:192.168.1.1, Board...	35.165.115.174	Amazon.com	Boardman	Verizon Fios	jerse
1470	[Local:192.168.143.1, Local:192.168.1.1, Board...	35.166.8.40	Amazon.com	Boardman	Verizon Fios	jerse
3389	[Local:192.168.143.1, Local:192.168.143.1, Loc...	10.0.0.1	Unknown	Unknown	Comcast Cable	s
3390	[Local:192.168.143.1, Local:192.168.143.1, Loc...	52.119.196.66	Amazon.com	Ashburn	Comcast Cable	s
16552	[Local:192.168.1.254, Los Angeles, Los Angeles...	23.55.37.113	Akamai Technologies	Rowland Heights	AT&T U-verse	los an

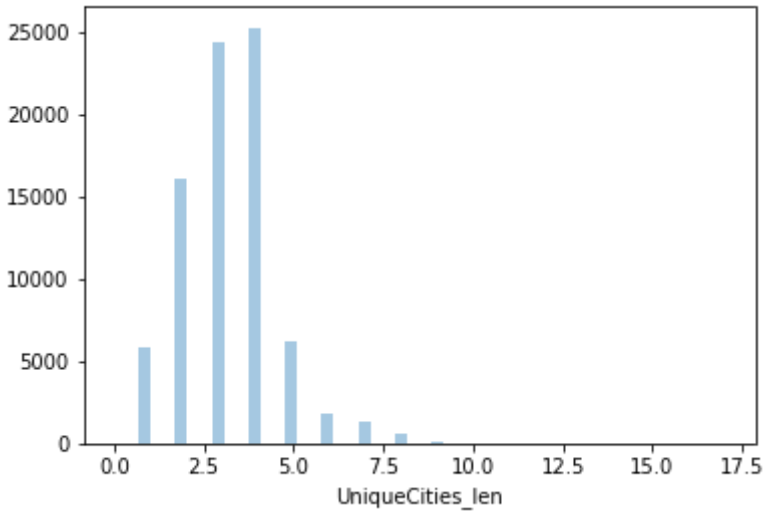
5 rows × 23 columns

In [9]:
```
# A typical traceroute in all resolved have **4 cities** in the path
sns.distplot(trdf_allresolved.UniqueCities_len, kde=False)
```

Out[9]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x1223296d8>
```

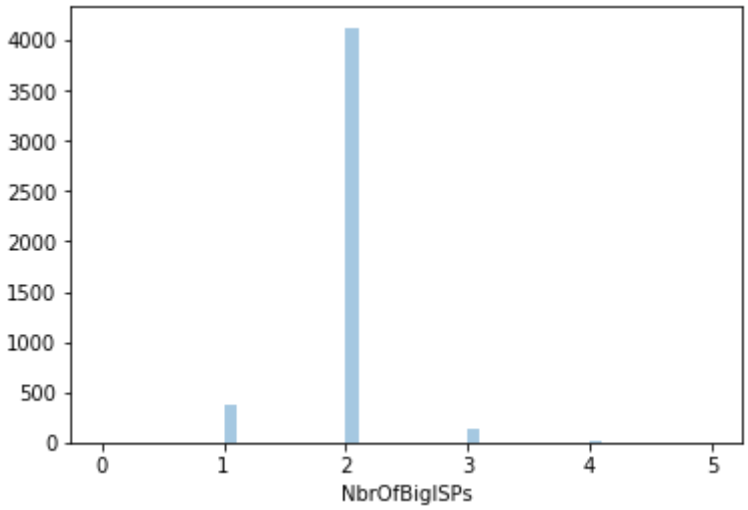


In [10]:
```
# A typical traceroute in all data have 3-4 cities in the path
sns.distplot(trdf.UniqueCities_len, kde=False);
```

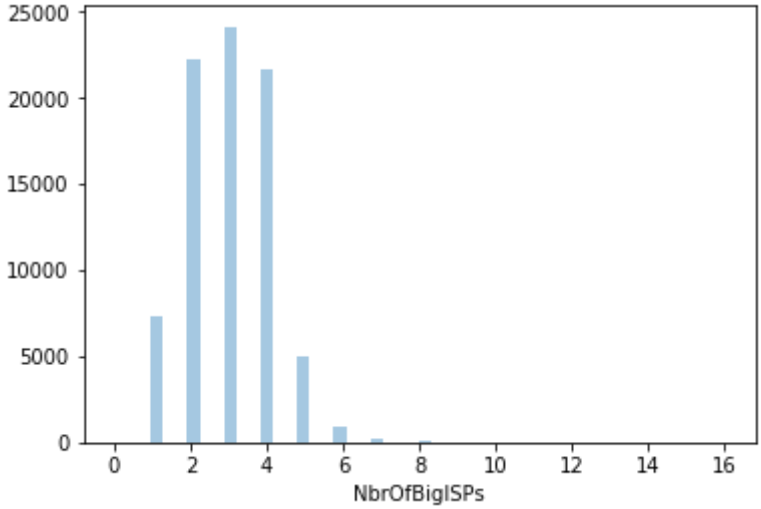


In [11]:
```
# NbrOfBigISPs > 2 are candidates for long/contigent routes?
sns.distplot(trdf_allresolved.NbrOfBigISPs, kde=False)
```

Out[11]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x122d7cdd8>
```



In [12]:
```
sns.distplot(trdf.NbrOfBigISPs, kde=False);
```



In [13]:
```
def printAnswers(id, nbrOfNetFlix, nbrOfNetFlixLong, nbrOfRegRoutes, nbr
OfLongRoutes): #TODO Don't repeat yr self
    print("----------------------------------------")
    df_NetFlix=trdf_allresolved[(trdf_allresolved.id == id) &
                                (trdf_allresolved.Meta=='Netflix')].head
(nbrOfNetFlix)
    for i,row in df_NetFlix.iterrows():
        id=row.id
        print("ID: "+id)
        print("Application: "+row.Meta)
        print("Location and ISP: "+di_dict[id]['city_y']+","+di_dict[id]
['state']+" / "+di_dict[id]['isp'])
        print("Type: Route to NetFlix")
        c = ""
        i = 0
        for city in row.City:
            if c != city: #DO NOT REPEAT CITY: TODO avg?
                print("HOP"+str(i+1)+" City:"+city+", ISP:"+row.ISP[i]+
", Latency:"+str(row.RTTs[i]))
                c=city
            #print("HOP"+str(i+1)+" City:"+city+" ISP:"+row.ISP[i]+", La
tency:"+str(row.RTTs[i]))
            i+=1
        print("Destination: "+str(row.DestHostLocation)+", "+str(row.Des
tHostISP))
        print("\n")
    df_NetFlixLong=trdf_allresolved[(trdf_allresolved.id == id) &
                                    (trdf_allresolved.Meta == 'Netflix')
&
                                    (trdf_allresolved.NbrOfBigISPs > 2)]
.head(nbrOfNetFlixLong)
    for i,row in df_NetFlixLong.iterrows():
        id=row.id
        print("ID: "+id)
        print("Application: "+row.Meta)
        print("Location and ISP: "+di_dict[id]['city_y']+","+di_dict[id]
['state']+" / "+di_dict[id]['isp'])
        print("Type: Route to NetFlix Through Long List of ISPs")
        c = ""
        i = 0
        for city in row.City:
            if c != city: #DO NOT REPEAT CITY: TODO avg?
                print("HOP"+str(i+1)+" City:"+city+", ISP:"+row.ISP[i]+
", Latency:"+str(row.RTTs[i]))
                c=city
            #print("HOP"+str(i+1)+" City:"+city+" ISP:"+row.ISP[i]+", La
tency:"+str(row.RTTs[i]))
            i+=1
        print("Destination: "+str(row.DestHostLocation)+", "+str(row.Des
tHostISP))
        print("\n")
    df_RegRoutes=trdf_allresolved[(trdf_allresolved.id == id) &
                                  (trdf_allresolved.Meta != 'Netflix') &
                                  (trdf_allresolved.NbrOfBigISPs < 3)].h
ead(nbrOfRegRoutes)
    for i,row in df_RegRoutes.iterrows():
```

```
        id=row.id
        print("ID: "+id)
        print("Application: "+row.Meta)
        print("Location and ISP: "+di_dict[id]['city_y']+","+di_dict[id]
['state']+" / "+di_dict[id]['isp'])
        print("Type: Route to Application")
        c = ""
        i = 0
        for city in row.City:
            if c != city: #DO NOT REPEAT CITY: TODO avg?
                print("HOP"+str(i+1)+" City:"+city+", ISP:"+row.ISP[i]+
", Latency:"+str(row.RTTs[i]))
                c=city
            #print("HOP"+str(i+1)+" City:"+city+" ISP:"+row.ISP[i]+", La
tency:"+str(row.RTTs[i]))
            i+=1
        print("Destination: "+str(row.DestHostLocation)+", "+str(row.Des
tHostISP))
        print("\n")
    df_LongRoutes=trdf_allresolved[(trdf_allresolved.id == id) &
                                   (trdf_allresolved.Meta != 'Netflix')&
                                   (trdf_allresolved.NbrOfBigISPs > 2)].h
ead(nbrOfLongRoutes)
    for i,row in df_LongRoutes.iterrows():
        id=row.id
        print("ID: "+id)
        print("Application: "+row.Meta)
        print("Location and ISP: "+di_dict[id]['city_y']+","+di_dict[id]
['state']+" / "+di_dict[id]['isp'])
        print("Type: Route to Application")
        c = ""
        i = 0
        for city in row.City:
            if c != city: #DO NOT REPEAT CITY: TODO avg?
                print("HOP"+str(i+1)+" City:"+city+", ISP:"+row.ISP[i]+
", Latency:"+str(row.RTTs[i]))
                c=city
            #print("HOP"+str(i+1)+" City:"+city+" ISP:"+row.ISP[i]+", La
tency:"+str(row.RTTs[i]))
            i+=1
        print("Destination: "+str(row.DestHostLocation)+", "+str(row.Des
tHostISP))
        print("\n")
for dev in list(di_dict.keys()):
    printAnswers(dev, 2, 2, 2 ,2)

#printAnswers("test_1521", 2, 2, 2 ,2)
#printAnswers("test_4287", 2, 2, 2 ,2)
```

```
----------------------------------------
ID: test_1521
Application: Netflix
Location and ISP: New York,NY / RCN
Type: Route to NetFlix
HOP1 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:11.
292328
HOP3 City:Albrightsville, ISP:RCN, Latency:3.866112
HOP4 City:Ashburn, ISP:Amazon.com, Latency:2.025059
HOP10 City:Woodside, ISP:RCN, Latency:31.525915
HOP11 City:Ashburn, ISP:Amazon.com, Latency:13.153382
HOP12 City:Woodside, ISP:RCN, Latency:31.788923
HOP14 City:Seattle, ISP:Amazon.com, Latency:29.135845
HOP17 City:Woodside, ISP:RCN, Latency:200.54782
HOP18 City:Seattle, ISP:Amazon.com, Latency:54.626583
HOP19 City:Woodside, ISP:RCN, Latency:10.401302
Destination: Ashburn, Amazon.com


ID: test_1521
Application: Netflix
Location and ISP: New York,NY / RCN
Type: Route to NetFlix
HOP1 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:9.7
12282
HOP4 City:Woodside, ISP:RCN, Latency:5.891171
HOP5 City:Albrightsville, ISP:RCN, Latency:5.318155
HOP7 City:Ashburn, ISP:Amazon.com, Latency:6.187179
HOP13 City:Woodside, ISP:RCN, Latency:34.87701
HOP14 City:Ashburn, ISP:Amazon.com, Latency:13.885403
HOP15 City:Woodside, ISP:RCN, Latency:33.07696
HOP17 City:Seattle, ISP:Amazon.com, Latency:29.171848
HOP20 City:Woodside, ISP:RCN, Latency:221.61844
HOP21 City:Seattle, ISP:Amazon.com, Latency:36.323055
HOP22 City:Woodside, ISP:RCN, Latency:28.716833
HOP25 City:Seattle, ISP:Amazon.com, Latency:486.50412
HOP26 City:Woodside, ISP:RCN, Latency:348.83212
Destination: Ashburn, Amazon.com


ID: test_1521
Application: Netflix
Location and ISP: New York,NY / RCN
Type: Route to NetFlix Through Long List of ISPs
HOP1 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:12.
278353
HOP2 City:Woodside, ISP:RCN, Latency:7.496215
HOP3 City:Albrightsville, ISP:RCN, Latency:16.131464
HOP5 City:Woodside, ISP:RCN, Latency:10.130292
HOP6 City:Ashburn, ISP:Amazon.com, Latency:27.014776
HOP8 City:Woodside, ISP:RCN, Latency:9.461272
HOP9 City:Seattle, ISP:Amazon.com, Latency:28.55282
HOP10 City:Woodside, ISP:RCN, Latency:33.66097
HOP12 City:Jersey City, ISP:Cogent Communications, Latency:103.56698
HOP13 City:Woodside, ISP:RCN, Latency:76.173195
HOP17 City:Jersey City, ISP:Cogent Communications, Latency:85.48145
HOP18 City:Woodside, ISP:RCN, Latency:45.417305
```

```
HOP19 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:12
4.905594
HOP20 City:Woodside, ISP:RCN, Latency:53.93355
HOP21 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:2
8.595823
HOP28 City:Woodside, ISP:RCN, Latency:39.397133
HOP30 City:Albrightsville, ISP:RCN, Latency:31.095894
Destination: Ashburn, Amazon.com


ID: test_1521
Application: Netflix
Location and ISP: New York,NY / RCN
Type: Route to NetFlix Through Long List of ISPs
HOP1 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:12.
895359
HOP2 City:Woodside, ISP:RCN, Latency:13.236368
HOP3 City:Albrightsville, ISP:RCN, Latency:20.633574
HOP5 City:Ashburn, ISP:Amazon.com, Latency:13.445374
HOP8 City:Woodside, ISP:RCN, Latency:89.8735
HOP9 City:Seattle, ISP:Amazon.com, Latency:26.718744
HOP10 City:Woodside, ISP:RCN, Latency:38.78308
HOP26 City:Jersey City, ISP:Cogent Communications, Latency:214.62798
Destination: Ashburn, Amazon.com


ID: test_1521
Application: Amazon
Location and ISP: New York,NY / RCN
Type: Route to Application
HOP1 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:12.
034344
HOP2 City:Woodside, ISP:RCN, Latency:5.60316
HOP3 City:Albrightsville, ISP:RCN, Latency:18.397526
HOP5 City:Ashburn, ISP:Amazon.com, Latency:12.454356
HOP8 City:Woodside, ISP:RCN, Latency:24.811708
HOP9 City:Ashburn, ISP:Amazon.com, Latency:32.494926
HOP10 City:Woodside, ISP:RCN, Latency:69.073975
HOP17 City:Seattle, ISP:Amazon.com, Latency:22.786652
HOP18 City:Woodside, ISP:RCN, Latency:38.403095
HOP20 City:Seattle, ISP:Amazon.com, Latency:19.905567
HOP21 City:Woodside, ISP:RCN, Latency:38.591103
Destination: Ashburn, Amazon.com


ID: test_1521
Application: Youtube
Location and ISP: New York,NY / RCN
Type: Route to Application
HOP1 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:15.
472435
HOP2 City:Woodside, ISP:RCN, Latency:21.4166
Destination: New York, RCN


ID: test_1521
Application: Amazon
```

```
Location and ISP: New York,NY / RCN
Type: Route to Application
HOP1 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:26.
502766
HOP2 City:Woodside, ISP:RCN, Latency:10.342299
HOP3 City:Albrightsville, ISP:RCN, Latency:20.296589
HOP4 City:Woodside, ISP:RCN, Latency:25.61774
HOP5 City:Ashburn, ISP:Amazon.com, Latency:11.884344
HOP8 City:Woodside, ISP:RCN, Latency:56.186623
HOP9 City:Ashburn, ISP:Amazon.com, Latency:28.835835
HOP10 City:Woodside, ISP:RCN, Latency:470.60062
HOP12 City:Local:192.168.143.75, ISP:Local:192.168.143.75, Latency:0.12
4003
HOP13 City:Woodside, ISP:RCN, Latency:77.61824
HOP16 City:Jersey City, ISP:Cogent Communications, Latency:191.86555
HOP17 City:Woodside, ISP:RCN, Latency:201.73784
HOP22 City:Jersey City, ISP:Cogent Communications, Latency:238.3629
HOP23 City:Woodside, ISP:RCN, Latency:155.9315
HOP28 City:Jersey City, ISP:Cogent Communications, Latency:286.10828
HOP29 City:Woodside, ISP:RCN, Latency:95.04174
Destination: Ashburn, Amazon.com


ID: test_1521
Application: Amazon
Location and ISP: New York,NY / RCN
Type: Route to Application
HOP1 City:Unresolved:10.49.32.1, ISP:Unresolved:10.49.32.1, Latency:19.
528564
HOP2 City:Woodside, ISP:RCN, Latency:41.84821
HOP3 City:Albrightsville, ISP:RCN, Latency:18.143524
HOP4 City:Woodside, ISP:RCN, Latency:62.248795
HOP5 City:Ashburn, ISP:Amazon.com, Latency:23.189669
HOP8 City:Woodside, ISP:RCN, Latency:88.117546
HOP9 City:Ashburn, ISP:Amazon.com, Latency:34.711
HOP10 City:Woodside, ISP:RCN, Latency:442.34177
HOP20 City:Jersey City, ISP:Cogent Communications, Latency:470.8166
HOP21 City:Woodside, ISP:RCN, Latency:104.82402
HOP23 City:Seattle, ISP:Amazon CloudFront, Latency:32.119926
Destination: Seattle, Amazon CloudFront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ID: test_5826
Application: Netflix
Location and ISP: Arlington,TX / AT&T U-verse
Type: Route to NetFlix
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:3.57011
6
HOP2 City:Arlington, ISP:AT&T U-verse, Latency:299.41275
HOP8 City:Anaheim, ISP:Beveridge & Diamond  P.C., Latency:176.56876
HOP9 City:Arlington, ISP:AT&T U-verse, Latency:7.948259
Destination: Boardman, Amazon.com


ID: test_5826
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Application: Amazon
Location and ISP: Arlington,TX / AT&T U-verse
Type: Route to Application
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:2.01806
7
HOP2 City:Arlington, ISP:AT&T U-verse, Latency:26.163868
HOP4 City:Rio Linda, ISP:AT&T Internet Services, Latency:12.997431
HOP5 City:Arlington, ISP:AT&T U-verse, Latency:0.293009
HOP6 City:Evansville, ISP:AT&T Services, Latency:20.043665
HOP7 City:Arlington, ISP:AT&T U-verse, Latency:67.40123
HOP8 City:Ashburn, ISP:Amazon.com, Latency:55.822853
HOP9 City:Arlington, ISP:AT&T U-verse, Latency:223.0364
Destination: Ashburn, Amazon.com


----------------------------------------
ID: test_1622
Application: Cloudfront CDN
Location and ISP: San Francisco,CA / AT&T U-verse
Type: Route to Application
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:1.31973
7
HOP2 City:San Francisco, ISP:AT&T U-verse, Latency:84.95993
HOP16 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:441.86
176
HOP17 City:Seattle, ISP:Amazon CloudFront, Latency:206.2641
Destination: Seattle, Amazon CloudFront


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ID: test_3515
Application: Netflix
Location and ISP: Chicago,IL / RCN
Type: Route to NetFlix
HOP1 City:Unresolved:10.48.8.1, ISP:Unresolved:10.48.8.1, Latency:10.96
7397
HOP2 City:Chicago, ISP:RCN, Latency:11.416355
Destination: Chicago, RCN


ID: test_3515
Application: Netflix
Location and ISP: Chicago,IL / RCN
Type: Route to NetFlix
HOP1 City:Unresolved:10.48.8.1, ISP:Unresolved:10.48.8.1, Latency:9.991
639
HOP4 City:Chicago, ISP:RCN, Latency:4.417303
HOP5 City:Skokie, ISP:RCN, Latency:14.129306
Destination: Skokie, RCN


ID: test_3515
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Application: Amazon
Location and ISP: Chicago,IL / RCN
Type: Route to Application
HOP1 City:Unresolved:10.48.8.1, ISP:Unresolved:10.48.8.1, Latency:10.23
1319
HOP2 City:Chicago, ISP:RCN, Latency:6.948518
HOP3 City:Albrightsville, ISP:RCN, Latency:32.068485
HOP6 City:Ashburn, ISP:Amazon.com, Latency:31.503016
HOP7 City:Chicago, ISP:RCN, Latency:8.176691
HOP8 City:Ashburn, ISP:Amazon.com, Latency:17.0652
HOP9 City:Chicago, ISP:RCN, Latency:30.693176
HOP10 City:Ashburn, ISP:Amazon.com, Latency:35.98774
HOP11 City:Chicago, ISP:RCN, Latency:16.162758
Destination: Ashburn, Amazon.com


ID: test_3515
Application: Amazon
Location and ISP: Chicago,IL / RCN
Type: Route to Application
HOP1 City:Unresolved:10.48.8.1, ISP:Unresolved:10.48.8.1, Latency:10.37
0649
HOP2 City:Chicago, ISP:RCN, Latency:11.37424
HOP3 City:Albrightsville, ISP:RCN, Latency:45.97826
HOP4 City:Chicago, ISP:RCN, Latency:10.868929
HOP5 City:Albrightsville, ISP:RCN, Latency:12.745643
HOP7 City:Ashburn, ISP:Amazon.com, Latency:11.610229
HOP10 City:Chicago, ISP:RCN, Latency:16.583757
HOP11 City:Ashburn, ISP:Amazon.com, Latency:27.37628
HOP12 City:Chicago, ISP:RCN, Latency:9.433829
Destination: Ashburn, Amazon.com


ID: test_3515
Application: Spotify
Location and ISP: Chicago,IL / RCN
Type: Route to Application
HOP1 City:Unresolved:10.48.8.1, ISP:Unresolved:10.48.8.1, Latency:11.12
2107
HOP2 City:Chicago, ISP:RCN, Latency:5.866523
HOP3 City:Albrightsville, ISP:RCN, Latency:10.535178
HOP5 City:Chicago, ISP:RCN, Latency:10.345282
HOP7 City:Lombard, ISP:EdgeCast Networks, Latency:10.027416
Destination: Lombard, EdgeCast Networks


ID: test_3515
Application: Amazon
Location and ISP: Chicago,IL / RCN
Type: Route to Application
HOP1 City:Unresolved:10.48.8.1, ISP:Unresolved:10.48.8.1, Latency:11.38
5999
HOP2 City:Chicago, ISP:RCN, Latency:0.169375
HOP4 City:Albrightsville, ISP:RCN, Latency:22.201893
HOP7 City:Ashburn, ISP:Amazon.com, Latency:3.649482
HOP9 City:Seattle, ISP:Amazon.com, Latency:37.814247
HOP10 City:Chicago, ISP:RCN, Latency:82.670746
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HOP16 City:St Louis, ISP:Level 3 Communications, Latency:329.04105
HOP17 City:Chicago, ISP:RCN, Latency:194.81859
HOP18 City:Seattle, ISP:Amazon.com, Latency:40.601337
HOP19 City:Chicago, ISP:RCN, Latency:30.470339
HOP23 City:St Louis, ISP:Level 3 Communications, Latency:368.27255
HOP24 City:Ashburn, ISP:Amazon.com, Latency:42.160454
HOP25 City:Chicago, ISP:RCN, Latency:240.37578
HOP30 City:St Louis, ISP:Level 3 Communications, Latency:274.93658
HOP31 City:Los Angeles, ISP:Cogent Communications, Latency:504.74847
Destination: Ashburn, Amazon.com


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ID: test_1549
Application: Netflix
Location and ISP: Los Angeles,CA / AT&T U-verse
Type: Route to NetFlix
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:1.39504
6
HOP2 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:2.9
81099
HOP3 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.1
71006
HOP4 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:5.1
19171
HOP5 City:Los Angeles, ISP:AT&T U-verse, Latency:10.291343
HOP6 City:Anaheim, ISP:Beveridge & Diamond  P.C., Latency:23.583786
HOP7 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:4.0
94137
HOP8 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:2.9
19097
HOP9 City:Local:192.168.143.156, ISP:Local:192.168.143.156, Latency:2.8
76095
HOP10 City:Los Angeles, ISP:AT&T U-verse, Latency:16.405546
HOP11 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:4
6.092537
HOP12 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.
629021
HOP13 City:Local:192.168.143.156, ISP:Local:192.168.143.156, Latency:0.
641021
HOP14 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:2.
954099
HOP15 City:Los Angeles, ISP:AT&T U-verse, Latency:13.17844
HOP16 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:4
8.349613
HOP17 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:2.
003067
HOP18 City:Los Angeles, ISP:AT&T U-verse, Latency:18.493616
HOP19 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:4
9.420647
HOP20 City:Local:192.168.143.156, ISP:Local:192.168.143.156, Latency:3.
712124
HOP21 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:1.
966066
HOP22 City:Los Angeles, ISP:AT&T U-verse, Latency:15.811527
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HOP23 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:47
8.67996
HOP24 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:4
8.284607
HOP25 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:5
3.233776
HOP26 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:4.
18814
HOP27 City:Local:192.168.143.156, ISP:Local:192.168.143.156, Latency:1
5.455515
HOP28 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:2
2.84976
HOP29 City:Los Angeles, ISP:AT&T U-verse, Latency:13.880463
HOP30 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:7.
714257
HOP31 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:9.
474315
Destination: Boardman, Amazon.com


ID: test_1549
Application: Netflix
Location and ISP: Los Angeles,CA / AT&T U-verse
Type: Route to NetFlix
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:1.50205
HOP2 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:1.6
72056
HOP3 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:1.7
48058
HOP4 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:6.1
74206
HOP5 City:Los Angeles, ISP:AT&T U-verse, Latency:10.342344
HOP6 City:Anaheim, ISP:Beveridge & Diamond  P.C., Latency:23.917795
HOP7 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:2.9
74099
HOP8 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.2
22007
HOP9 City:Local:192.168.143.92, ISP:Local:192.168.143.92, Latency:0.936
031
HOP10 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:1.
590053
HOP11 City:Los Angeles, ISP:AT&T U-verse, Latency:18.442616
HOP12 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:5
0.617687
HOP13 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.
60302
HOP14 City:Local:192.168.143.92, ISP:Local:192.168.143.92, Latency:0.36
1012
HOP15 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:6.
333212
HOP16 City:Los Angeles, ISP:AT&T U-verse, Latency:10.628354
HOP17 City:Boardman, ISP:Amazon.com, Latency:6.169206
HOP18 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:1
0.422347
HOP19 City:Local:192.168.143.92, ISP:Local:192.168.143.92, Latency:0.64
6021
HOP20 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:1.
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348045
HOP21 City:Los Angeles, ISP:AT&T U-verse, Latency:15.661522
HOP22 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:5
1.0447
HOP23 City:Local:192.168.143.92, ISP:Local:192.168.143.92, Latency:0.48
8016
HOP24 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:7.
023234
HOP25 City:Los Angeles, ISP:AT&T U-verse, Latency:11.438381
HOP26 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:1
7.9576
HOP27 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:2
8.896963
HOP28 City:Los Angeles, ISP:AT&T U-verse, Latency:22.377747
HOP29 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:2
3.36778
HOP30 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:3
0.773024
HOP31 City:Los Angeles, ISP:AT&T U-verse, Latency:20.09667
Destination: Boardman, Amazon


ID: test_1549
Application: Netflix
Location and ISP: Los Angeles,CA / AT&T U-verse
Type: Route to NetFlix Through Long List of ISPs
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:1.50205
HOP2 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:1.6
72056
HOP3 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:1.7
48058
HOP4 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:6.1
74206
HOP5 City:Los Angeles, ISP:AT&T U-verse, Latency:10.342344
HOP6 City:Anaheim, ISP:Beveridge & Diamond  P.C., Latency:23.917795
HOP7 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:2.9
74099
HOP8 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.2
22007
HOP9 City:Local:192.168.143.92, ISP:Local:192.168.143.92, Latency:0.936
031
HOP10 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:1.
590053
HOP11 City:Los Angeles, ISP:AT&T U-verse, Latency:18.442616
HOP12 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:5
0.617687
HOP13 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.
60302
HOP14 City:Local:192.168.143.92, ISP:Local:192.168.143.92, Latency:0.36
1012
HOP15 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:6.
333212
HOP16 City:Los Angeles, ISP:AT&T U-verse, Latency:10.628354
HOP17 City:Boardman, ISP:Amazon.com, Latency:6.169206
HOP18 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:1
0.422347
HOP19 City:Local:192.168.143.92, ISP:Local:192.168.143.92, Latency:0.64
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6021
HOP20 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:1.
348045
HOP21 City:Los Angeles, ISP:AT&T U-verse, Latency:15.661522
HOP22 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:5
1.0447
HOP23 City:Local:192.168.143.92, ISP:Local:192.168.143.92, Latency:0.48
8016
HOP24 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:7.
023234
HOP25 City:Los Angeles, ISP:AT&T U-verse, Latency:11.438381
HOP26 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:1
7.9576
HOP27 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:2
8.896963
HOP28 City:Los Angeles, ISP:AT&T U-verse, Latency:22.377747
HOP29 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:2
3.36778
HOP30 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:3
0.773024
HOP31 City:Los Angeles, ISP:AT&T U-verse, Latency:20.09667
Destination: Boardman, Amazon


ID: test_1549
Application: HBO
Location and ISP: Los Angeles,CA / AT&T U-verse
Type: Route to Application
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:1.03803
5
HOP2 City:Los Angeles, ISP:AT&T U-verse, Latency:11.624388
HOP4 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:4.8
94164
HOP5 City:Rowland Heights, ISP:Akamai Technologies, Latency:1.831061
Destination: Rowland Heights, Akamai Technologies


ID: test_1549
Application: Hulu
Location and ISP: Los Angeles,CA / AT&T U-verse
Type: Route to Application
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:1.53205
1
HOP2 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:3.7
59125
HOP3 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.1
79006
HOP4 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:3.5
8212
HOP5 City:Los Angeles, ISP:AT&T U-verse, Latency:11.68139
HOP6 City:Anaheim, ISP:Beveridge & Diamond  P.C., Latency:22.698755
HOP7 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:61.
50105
HOP8 City:Los Angeles, ISP:AT&T U-verse, Latency:20.10967
HOP9 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:12.
282409
HOP10 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:3
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9.22231
HOP11 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:1
0.80436
HOP12 City:Los Angeles, ISP:AT&T U-verse, Latency:9.565319
HOP13 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:5
1.814728
HOP14 City:Los Angeles, ISP:AT&T U-verse, Latency:22.21874
HOP15 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:3.
29711
HOP16 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:1
0.126338
HOP17 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:47
7.96893
HOP19 City:Los Angeles, ISP:AT&T U-verse, Latency:13.79946
HOP20 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:1
7.40458
HOP21 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:6.
093203
HOP22 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:3
1.945066
HOP23 City:Los Angeles, ISP:AT&T U-verse, Latency:19.423649
HOP24 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:2
7.134905
HOP25 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:2
7.394913
HOP26 City:Los Angeles, ISP:AT&T U-verse, Latency:15.0025
HOP27 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:7.
816261
HOP28 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:6.
109203
HOP29 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:3
7.617256
HOP30 City:Los Angeles, ISP:AT&T U-verse, Latency:18.0146
HOP31 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:1
6.632555
Destination: Boardman, Amazon.com


ID: test_1549
Application: Facebook
Location and ISP: Los Angeles,CA / AT&T U-verse
Type: Route to Application
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:2.49208
3
HOP2 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.7
12024
HOP3 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:2.2
51075
HOP4 City:Los Angeles, ISP:AT&T U-verse, Latency:16.377546
HOP6 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:3.9
27131
HOP7 City:Los Angeles, ISP:AT&T U-verse, Latency:8.842295
Destination: Los Angeles, Facebook Ireland Ltd


ID: test_1549
Application: Facebook
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Location and ISP: Los Angeles,CA / AT&T U-verse
Type: Route to Application
HOP1 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:0.59702
HOP2 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.2
08007
HOP3 City:Local:192.168.1.254, ISP:Local:192.168.1.254, Latency:0.37701
3
HOP4 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:2.3
17077
HOP5 City:Los Angeles, ISP:AT&T U-verse, Latency:16.500551
HOP9 City:Local:192.168.143.160, ISP:Local:192.168.143.160, Latency:7.1
40238
HOP10 City:Local:192.168.143.186, ISP:Local:192.168.143.186, Latency:0.
230008
HOP11 City:Local:192.168.143.188, ISP:Local:192.168.143.188, Latency:5.
894196
HOP12 City:Los Angeles, ISP:Facebook Ireland Ltd, Latency:9.111303
Destination: Los Angeles, Facebook Ireland Ltd


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ID: test_9892
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix
HOP1 City:New York, ISP:Spectrum, Latency:20.823544
HOP4 City:Englewood, ISP:Spectrum, Latency:13.644723
HOP5 City:Ashburn, ISP:Amazon.com, Latency:16.501188
HOP7 City:New York, ISP:Spectrum, Latency:5.233867
Destination: Ashburn, Amazon.com


ID: test_9892
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix
HOP1 City:New York, ISP:Spectrum, Latency:30.688313
HOP5 City:Englewood, ISP:Spectrum, Latency:0.960941
HOP6 City:New York, ISP:Spectrum, Latency:19.462189
HOP7 City:Ashburn, ISP:Amazon.com, Latency:21.283287
HOP8 City:New York, ISP:Spectrum, Latency:49.81373
Destination: Ashburn, Amazon.com


ID: test_9892
Application: Cloudfront CDN
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:12.075683
HOP4 City:Englewood, ISP:Spectrum, Latency:18.355791
HOP5 City:Ashburn, ISP:Amazon.com, Latency:16.35928
HOP8 City:New York, ISP:Spectrum, Latency:77.73238
HOP13 City:Seattle, ISP:Amazon CloudFront, Latency:9.378911
Destination: Seattle, Amazon CloudFront
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ID: test_9892
Application: Amazon
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:18.028145
HOP5 City:Ashburn, ISP:Amazon.com, Latency:12.35517
HOP8 City:New York, ISP:Spectrum, Latency:425.67206
Destination: Ashburn, Amazon.com


ID: test_9892
Application: Amazon
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:11.430635
HOP4 City:Englewood, ISP:Spectrum, Latency:18.741892
HOP5 City:New York, ISP:Spectrum, Latency:10.538968
HOP6 City:Ashburn, ISP:Amazon.com, Latency:12.103552
HOP7 City:Seattle, ISP:Amazon.com, Latency:25.439398
HOP8 City:Ashburn, ISP:Amazon.com, Latency:19.575226
HOP9 City:New York, ISP:Spectrum, Latency:76.80293
HOP10 City:Ashburn, ISP:Amazon.com, Latency:19.622934
HOP11 City:Jersey City, ISP:Cogent Communications, Latency:92.58102
HOP12 City:New York, ISP:Spectrum, Latency:372.09003
HOP17 City:Jersey City, ISP:Cogent Communications, Latency:115.79146
HOP18 City:New York, ISP:Spectrum, Latency:308.52652
HOP23 City:Jersey City, ISP:Cogent Communications, Latency:179.48
HOP24 City:New York, ISP:Spectrum, Latency:139.01122
Destination: Ashburn, Amazon.com


ID: test_9892
Application: Hulu
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:16.48864
HOP5 City:Ashburn, ISP:Amazon.com, Latency:110.897804
HOP6 City:New York, ISP:Spectrum, Latency:457.52344
HOP7 City:Inwood, ISP:Level 3 Communications, Latency:19.227137
HOP8 City:San Mateo, ISP:Conviva, Latency:17.801249
Destination: San Mateo, Conviva


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ID: test_1464
Application: Netflix
Location and ISP: Brooklyn,NY / Windstream Communications
Type: Route to NetFlix
HOP1 City:New York, ISP:Spectrum, Latency:15.674374
HOP4 City:Englewood, ISP:Spectrum, Latency:16.348642
HOP5 City:New York, ISP:Spectrum, Latency:7.467579
Destination: nan, Netflix Streaming Services
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ID: test_1464
Application: Netflix
Location and ISP: Brooklyn,NY / Windstream Communications
Type: Route to NetFlix
HOP1 City:New York, ISP:Spectrum, Latency:38.469772
HOP4 City:Englewood, ISP:Spectrum, Latency:19.35098
HOP5 City:Ashburn, ISP:Amazon.com, Latency:11.816629
HOP8 City:New York, ISP:Spectrum, Latency:153.01915
Destination: Ashburn, Amazon.com


ID: test_1464
Application: HBO
Location and ISP: Brooklyn,NY / Windstream Communications
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:28.256945
HOP4 City:Englewood, ISP:Spectrum, Latency:17.391924
HOP5 City:Ashburn, ISP:Amazon.com, Latency:16.847084
HOP6 City:New York, ISP:Spectrum, Latency:20.604156
HOP7 City:Ashburn, ISP:Amazon.com, Latency:27.874496
HOP8 City:New York, ISP:Spectrum, Latency:21.389153
Destination: Ashburn, Amazon.com


ID: test_1464
Application: HBO
Location and ISP: Brooklyn,NY / Windstream Communications
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:19.277231
HOP4 City:Englewood, ISP:Spectrum, Latency:11.843609
HOP5 City:New York, ISP:Spectrum, Latency:6.690865
Destination: nan, Level 3 Communications


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ID: test_6445
Application: Cloudfront CDN
Location and ISP: Washington,DC / Verizon Internet Services
Type: Route to Application
HOP1 City:Local:192.168.1.1, ISP:Local:192.168.1.1, Latency:2.382072
HOP2 City:Seattle, ISP:Amazon CloudFront, Latency:7.00421
HOP5 City:Garland, ISP:ANS Communications, Latency:5.774173
HOP7 City:Seattle, ISP:Amazon.com, Latency:6.629198
Destination: Seattle, Amazon CloudFront


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ID: test_4287
Application: Netflix
Location and ISP: Park Ridge,IL / WideOpenWest
Type: Route to NetFlix
HOP1 City:Local:192.168.0.1, ISP:Local:192.168.0.1, Latency:2.169818
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HOP3 City:Park Ridge, ISP:WideOpenWest, Latency:12.483497
HOP4 City:Reynoldsburg, ISP:WideOpenWest, Latency:14.188998
HOP5 City:Park Ridge, ISP:WideOpenWest, Latency:8.73526
HOP6 City:Western Springs, ISP:WideOpenWest, Latency:16.174288
HOP7 City:Park Ridge, ISP:WideOpenWest, Latency:6.376539
Destination: Palos Park, WideOpenWest


ID: test_4287
Application: Netflix
Location and ISP: Park Ridge,IL / WideOpenWest
Type: Route to NetFlix
HOP1 City:Local:192.168.0.1, ISP:Local:192.168.0.1, Latency:2.542834
HOP3 City:Park Ridge, ISP:WideOpenWest, Latency:12.645839
HOP4 City:Reynoldsburg, ISP:WideOpenWest, Latency:4.705569
HOP5 City:Park Ridge, ISP:WideOpenWest, Latency:16.280016
HOP6 City:Western Springs, ISP:WideOpenWest, Latency:8.147508
HOP7 City:Park Ridge, ISP:WideOpenWest, Latency:0.291924
Destination: Mason, WideOpenWest


ID: test_4287
Application: Cloudfront CDN
Location and ISP: Park Ridge,IL / WideOpenWest
Type: Route to Application
HOP1 City:Local:192.168.0.1, ISP:Local:192.168.0.1, Latency:2.404656
HOP2 City:Park Ridge, ISP:WideOpenWest, Latency:15.844374
HOP3 City:Reynoldsburg, ISP:WideOpenWest, Latency:12.808684
HOP4 City:Park Ridge, ISP:WideOpenWest, Latency:19.719374
HOP5 City:Huntsville, ISP:WideOpenWest, Latency:30.4259
HOP6 City:Park Ridge, ISP:WideOpenWest, Latency:0.411453
HOP7 City:Carol Stream, ISP:WideOpenWest, Latency:49.75278
HOP8 City:Evansville, ISP:WideOpenWest, Latency:29.715649
HOP10 City:Ashburn, ISP:Amazon.com, Latency:29.474714
HOP11 City:Park Ridge, ISP:WideOpenWest, Latency:3.072824
HOP12 City:Ashburn, ISP:Amazon.com, Latency:29.625336
HOP13 City:Park Ridge, ISP:WideOpenWest, Latency:89.606415
HOP18 City:Seattle, ISP:Amazon CloudFront, Latency:30.297203
Destination: Seattle, Amazon CloudFront


ID: test_4287
Application: Amazon
Location and ISP: Park Ridge,IL / WideOpenWest
Type: Route to Application
HOP1 City:Local:192.168.0.1, ISP:Local:192.168.0.1, Latency:2.369292
HOP2 City:Park Ridge, ISP:WideOpenWest, Latency:23.733696
HOP3 City:Reynoldsburg, ISP:WideOpenWest, Latency:25.510445
HOP5 City:Huntsville, ISP:WideOpenWest, Latency:29.63612
HOP6 City:Park Ridge, ISP:WideOpenWest, Latency:7.703648
HOP7 City:Carol Stream, ISP:WideOpenWest, Latency:29.618517
HOP8 City:Evansville, ISP:WideOpenWest, Latency:29.447996
HOP10 City:Ashburn, ISP:Amazon.com, Latency:29.397997
HOP13 City:Park Ridge, ISP:WideOpenWest, Latency:204.47475
HOP15 City:Ashburn, ISP:Amazon.com, Latency:49.302837
HOP16 City:Park Ridge, ISP:WideOpenWest, Latency:129.56224
HOP25 City:Seattle, ISP:Amazon.com, Latency:48.909145
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HOP27 City:Park Ridge, ISP:WideOpenWest, Latency:79.7689
Destination: Ashburn, Amazon.com


ID: test_4287
Application: Amazon
Location and ISP: Park Ridge,IL / WideOpenWest
Type: Route to Application
HOP1 City:Local:192.168.0.1, ISP:Local:192.168.0.1, Latency:2.44857
HOP2 City:Park Ridge, ISP:WideOpenWest, Latency:11.006771
HOP3 City:Reynoldsburg, ISP:WideOpenWest, Latency:23.1203
HOP5 City:Huntsville, ISP:WideOpenWest, Latency:29.498888
HOP6 City:Park Ridge, ISP:WideOpenWest, Latency:21.180737
HOP7 City:Carol Stream, ISP:WideOpenWest, Latency:28.093693
HOP8 City:Evansville, ISP:WideOpenWest, Latency:29.454563
HOP10 City:Ashburn, ISP:Amazon.com, Latency:29.439407
HOP13 City:Park Ridge, ISP:WideOpenWest, Latency:49.729477
HOP14 City:Seattle, ISP:Amazon.com, Latency:49.391094
HOP15 City:Ashburn, ISP:Amazon.com, Latency:48.367146
HOP16 City:Park Ridge, ISP:WideOpenWest, Latency:84.01467
HOP29 City:Porto Alegre, ISP:Universidade Federal do Rio Grande do Sul,
Latency:339.31476
HOP30 City:Park Ridge, ISP:WideOpenWest, Latency:149.0567
HOP31 City:Birmingham, ISP:Level 3 Communications, Latency:0.384736
Destination: Ashburn, Amazon.com


ID: test_4287
Application: Cloudfront CDN
Location and ISP: Park Ridge,IL / WideOpenWest
Type: Route to Application
HOP1 City:Local:192.168.0.1, ISP:Local:192.168.0.1, Latency:2.833041
HOP2 City:Park Ridge, ISP:WideOpenWest, Latency:12.265173
HOP3 City:Reynoldsburg, ISP:WideOpenWest, Latency:19.394625
HOP5 City:Huntsville, ISP:WideOpenWest, Latency:19.8579
HOP6 City:Western Springs, ISP:WideOpenWest, Latency:29.607632
HOP7 City:Carol Stream, ISP:WideOpenWest, Latency:29.70586
HOP8 City:Evansville, ISP:WideOpenWest, Latency:29.848673
HOP10 City:Ashburn, ISP:Amazon.com, Latency:29.54732
HOP13 City:Park Ridge, ISP:WideOpenWest, Latency:85.36513
HOP14 City:Porto Alegre, ISP:Universidade Federal do Rio Grande do Sul,
Latency:2.918248
HOP16 City:Park Ridge, ISP:WideOpenWest, Latency:3.784749
HOP18 City:Birmingham, ISP:Level 3 Communications, Latency:13.264016
HOP19 City:Seattle, ISP:Amazon CloudFront, Latency:22.333029
Destination: Seattle, Amazon CloudFront


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ID: test_5838
Application: Amazon
Location and ISP: North Brunswick,NJ / Optimum Online
Type: Route to Application
HOP1 City:Unresolved:10.240.163.45, ISP:Unresolved:10.240.163.45, Laten
cy:2.490156
HOP4 City:Staatsburg, ISP:Optimum Online, Latency:3.542222
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HOP6 City:Sayville, ISP:Optimum Online, Latency:0.462029
Destination: Sayville, Optimum Online


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ID: test_8265
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix
HOP1 City:New York, ISP:Spectrum, Latency:21.525421
HOP4 City:Englewood, ISP:Spectrum, Latency:17.109337
HOP5 City:Ashburn, ISP:Amazon.com, Latency:21.350418
HOP8 City:New York, ISP:Spectrum, Latency:462.78806
Destination: Ashburn, Amazon.com


ID: test_8265
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix
HOP1 City:New York, ISP:Spectrum, Latency:13.654268
HOP5 City:Ashburn, ISP:Amazon.com, Latency:21.659424
HOP8 City:New York, ISP:Spectrum, Latency:356.494
Destination: Ashburn, Amazon.com


ID: test_8265
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix Through Long List of ISPs
HOP1 City:New York, ISP:Spectrum, Latency:16.002321
HOP5 City:Ashburn, ISP:Amazon.com, Latency:13.41027
HOP8 City:New York, ISP:Spectrum, Latency:343.3479
HOP27 City:Jersey City, ISP:Cogent Communications, Latency:65.83232
HOP28 City:New York, ISP:Spectrum, Latency:72.46745
Destination: Ashburn, Amazon.com


ID: test_8265
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix Through Long List of ISPs
HOP1 City:New York, ISP:Spectrum, Latency:17.333355
HOP5 City:Ashburn, ISP:Amazon.com, Latency:12.947265
HOP8 City:New York, ISP:Spectrum, Latency:408.88336
HOP23 City:Cape Town, ISP:UNINET Project, Latency:304.0212
HOP24 City:Mitaka, ISP:WIDE Project, Latency:323.3306
Destination: Ashburn, Amazon.com
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ID: test_8265
Application: Amazon
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:15.193298
HOP4 City:Englewood, ISP:Spectrum, Latency:22.092434
HOP5 City:New York, ISP:Spectrum, Latency:24.96649
HOP6 City:Ashburn, ISP:Amazon.com, Latency:15.519304
HOP7 City:New York, ISP:Spectrum, Latency:484.59952
HOP8 City:Ashburn, ISP:Amazon.com, Latency:26.51552
HOP9 City:New York, ISP:Spectrum, Latency:25.661505
Destination: Ashburn, Amazon.com


ID: test_8265
Application: Amazon
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:16.558332
HOP5 City:Englewood, ISP:Spectrum, Latency:2.567052
HOP6 City:Ashburn, ISP:Amazon.com, Latency:23.085464
HOP9 City:New York, ISP:Spectrum, Latency:446.79398
HOP14 City:Seattle, ISP:Amazon CloudFront, Latency:16.381329
Destination: Seattle, Amazon CloudFront


ID: test_8265
Application: Cloudfront CDN
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:New York, ISP:Spectrum, Latency:6.547131
HOP3 City:Englewood, ISP:Spectrum, Latency:11.57723
HOP4 City:Ashburn, ISP:Amazon.com, Latency:14.224283
HOP10 City:Seattle, ISP:Amazon CloudFront, Latency:37.279743
HOP11 City:Los Angeles, ISP:Cogent Communications, Latency:110.973206
HOP12 City:Seattle, ISP:Amazon CloudFront, Latency:21.525429
Destination: Seattle, Amazon CloudFront


ID: test_8265
Application: Amazon
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:Canberra, ISP:Australian Academic and Research Network (AARNe
t), Latency:244.90793
HOP2 City:New York, ISP:Spectrum, Latency:4.188084
HOP5 City:Ashburn, ISP:Amazon.com, Latency:17.95236
HOP6 City:Canberra, ISP:Australian Academic and Research Network (AARNe
t), Latency:7.488151
HOP7 City:Ashburn, ISP:Amazon.com, Latency:19.165386
HOP10 City:Canberra, ISP:Australian Academic and Research Network (AARN
et), Latency:381.1987
HOP15 City:Seattle, ISP:Amazon CloudFront, Latency:51.54704
HOP16 City:Canberra, ISP:Australian Academic and Research Network (AARN
et), Latency:1.226025
HOP25 City:Seattle, ISP:Cogent Communications, Latency:284.98074
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HOP29 City:Canberra, ISP:Australian Academic and Research Network (AARN
et), Latency:479.68765
HOP30 City:New York, ISP:Spectrum, Latency:24.501493
Destination: Ashburn, Amazon.com


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ID: test_7107
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.51103
2
HOP2 City:New York, ISP:Spectrum, Latency:105.9957
HOP5 City:Englewood, ISP:Spectrum, Latency:1.356086
HOP6 City:Ashburn, ISP:Amazon.com, Latency:0.919059
HOP7 City:New York, ISP:Spectrum, Latency:9.773618
HOP8 City:Seattle, ISP:Amazon.com, Latency:19.174212
HOP9 City:Ashburn, ISP:Amazon.com, Latency:10.621671
HOP10 City:New York, ISP:Spectrum, Latency:452.7966
HOP11 City:Ashburn, ISP:Amazon.com, Latency:20.152271
HOP12 City:Seattle, ISP:Amazon CloudFront, Latency:7.43047
HOP14 City:New York, ISP:Spectrum, Latency:71.91354
HOP27 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:13.5
78858
Destination: Ashburn, Amazon.com


ID: test_7107
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:1.02106
5
HOP2 City:Local:192.168.143.21, ISP:Local:192.168.143.21, Latency:12.36
2781
HOP3 City:New York, ISP:Spectrum, Latency:10.313652
HOP5 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:9.808
619
HOP6 City:Ashburn, ISP:Amazon.com, Latency:13.712866
HOP9 City:New York, ISP:Spectrum, Latency:7.191454
HOP11 City:Local:192.168.143.21, ISP:Local:192.168.143.21, Latency:301.
69208
HOP12 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:19.0
71203
HOP13 City:Local:192.168.143.21, ISP:Local:192.168.143.21, Latency:22.8
83446
HOP14 City:New York, ISP:Spectrum, Latency:30.784945
HOP15 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:2.64
0167
HOP16 City:Local:192.168.143.21, ISP:Local:192.168.143.21, Latency:16.8
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09065
HOP17 City:New York, ISP:Spectrum, Latency:34.300167
HOP18 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:4.35
5275
HOP19 City:Local:192.168.143.21, ISP:Local:192.168.143.21, Latency:23.0
57455
HOP20 City:New York, ISP:Spectrum, Latency:23.875507
HOP21 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:11.9
32754
HOP22 City:Local:192.168.143.21, ISP:Local:192.168.143.21, Latency:16.7
34056
HOP23 City:New York, ISP:Spectrum, Latency:28.362791
HOP24 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:5.81
1367
HOP25 City:New York, ISP:Spectrum, Latency:237.25099
HOP27 City:Local:192.168.143.21, ISP:Local:192.168.143.21, Latency:5.02
8318
HOP29 City:New York, ISP:Spectrum, Latency:36.73932
HOP30 City:Local:192.168.143.21, ISP:Local:192.168.143.21, Latency:38.2
57416
HOP31 City:New York, ISP:Spectrum, Latency:32.48905
Destination: Ashburn, Amazon.com


ID: test_7107
Application: Netflix
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix Through Long List of ISPs
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.87305
5
HOP2 City:New York, ISP:Spectrum, Latency:8.454533
HOP4 City:Englewood, ISP:Spectrum, Latency:27.066708
HOP5 City:Ashburn, ISP:Amazon.com, Latency:10.78668
HOP7 City:Seattle, ISP:Amazon.com, Latency:20.360285
HOP8 City:Ashburn, ISP:Amazon.com, Latency:15.964007
HOP9 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:480.753
36
HOP10 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:73.4
7963
HOP11 City:New York, ISP:Spectrum, Latency:11.72574
HOP13 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:6.77
5428
HOP14 City:Ashburn, ISP:Amazon.com, Latency:34.821198
HOP15 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:31.5
73992
HOP16 City:Ashburn, ISP:Amazon.com, Latency:21.440351
HOP17 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:136.
2706
HOP27 City:Los Angeles, ISP:Tata Communications (america), Latency:15.2
03959
HOP28 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:454.
4557
Destination: Ashburn, Amazon.com


ID: test_7107
Application: Netflix
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Location and ISP: Brooklyn,NY / Spectrum
Type: Route to NetFlix Through Long List of ISPs
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.78105
HOP2 City:New York, ISP:Spectrum, Latency:14.147893
HOP4 City:Englewood, ISP:Spectrum, Latency:13.329842
HOP5 City:Ashburn, ISP:Amazon.com, Latency:15.094953
HOP7 City:Seattle, ISP:Amazon.com, Latency:16.00701
HOP8 City:Ashburn, ISP:Amazon.com, Latency:12.719803
HOP9 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:15.81
2998
HOP11 City:Nanterre, ISP:GTT Communications Inc., Latency:8.988567
HOP12 City:Seattle, ISP:Amazon CloudFront, Latency:22.607426
HOP13 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:19.3
91224
HOP18 City:Nanterre, ISP:GTT Communications Inc., Latency:29.286848
HOP19 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:44.4
7881
HOP24 City:Nanterre, ISP:GTT Communications Inc., Latency:65.18912
HOP25 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:8.66
1547
HOP27 City:Nanterre, ISP:GTT Communications Inc., Latency:16.270025
HOP28 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:97.2
2314
Destination: Ashburn, Amazon.com


ID: test_7107
Application: Amazon
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:1.64410
4
HOP2 City:New York, ISP:Spectrum, Latency:100.51734
HOP6 City:Englewood, ISP:Spectrum, Latency:4.110259
HOP7 City:Ashburn, ISP:Amazon.com, Latency:14.013885
HOP8 City:Seattle, ISP:Amazon.com, Latency:13.544855
HOP9 City:Ashburn, ISP:Amazon.com, Latency:16.29403
HOP10 City:New York, ISP:Spectrum, Latency:52.935345
HOP25 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:16.8
14062
HOP29 City:New York, ISP:Spectrum, Latency:57.943657
HOP30 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:18.5
87173
HOP31 City:New York, ISP:Spectrum, Latency:60.784836
Destination: Ashburn, Amazon.com


ID: test_7107
Application: Cloudfront CDN
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.88205
6
HOP2 City:New York, ISP:Spectrum, Latency:169.5377
HOP5 City:Englewood, ISP:Spectrum, Latency:17.778124
HOP6 City:Ashburn, ISP:Amazon.com, Latency:15.951008
HOP9 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:15.69
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5991
HOP11 City:Seattle, ISP:Amazon CloudFront, Latency:18.420164
Destination: Seattle, Amazon CloudFront


ID: test_7107
Application: Cloudfront CDN
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:1.71510
9
HOP2 City:Jersey City, ISP:Cogent Communications, Latency:30.270916
HOP3 City:New York, ISP:Spectrum, Latency:11.191708
HOP5 City:Englewood, ISP:Spectrum, Latency:20.181276
HOP6 City:Ashburn, ISP:Amazon.com, Latency:13.605861
HOP9 City:Local:192.168.143.26, ISP:Local:192.168.143.26, Latency:454.2
4072
HOP10 City:New York, ISP:Spectrum, Latency:127.08004
HOP14 City:Seattle, ISP:Amazon CloudFront, Latency:15.8
Destination: Seattle, Amazon CloudFront


ID: test_7107
Application: Amazon
Location and ISP: Brooklyn,NY / Spectrum
Type: Route to Application
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.83505
3
HOP2 City:New York, ISP:Spectrum, Latency:35.051216
HOP5 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:0.224
014
HOP6 City:Ashburn, ISP:Amazon.com, Latency:11.093702
HOP8 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:0.363
023
HOP9 City:Seattle, ISP:Amazon.com, Latency:4.358276
HOP10 City:Jersey City, ISP:Cogent Communications, Latency:24.66456
HOP11 City:Ashburn, ISP:Amazon.com, Latency:36.3543
HOP12 City:New York, ISP:Spectrum, Latency:2.572163
HOP13 City:Ashburn, ISP:Amazon.com, Latency:9.212582
HOP14 City:Local:192.168.143.30, ISP:Local:192.168.143.30, Latency:38.3
7943
HOP15 City:Seattle, ISP:Amazon CloudFront, Latency:14.096891
HOP16 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:5.60
0355
HOP17 City:Local:192.168.143.30, ISP:Local:192.168.143.30, Latency:19.5
42236
HOP18 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:45.6
5289
HOP19 City:Local:192.168.143.30, ISP:Local:192.168.143.30, Latency:6.75
6427
HOP20 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:68.9
0736
HOP21 City:New York, ISP:Spectrum, Latency:3.280208
HOP22 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:68.2
6232
HOP23 City:New York, ISP:Spectrum, Latency:4.089259
HOP24 City:Local:192.168.143.30, ISP:Local:192.168.143.30, Latency:2.17
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3137
HOP25 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:47.9
5203
HOP26 City:New York, ISP:Spectrum, Latency:4.847306
HOP28 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:51.1
55235
HOP29 City:New York, ISP:Spectrum, Latency:34.860203
HOP30 City:Local:192.168.143.32, ISP:Local:192.168.143.32, Latency:29.1
97845
HOP31 City:New York, ISP:Spectrum, Latency:28.12678
Destination: Ashburn, Amazon.com


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ID: test_5689
Application: Amazon
Location and ISP: Seattle,WA / Comcast Cable
Type: Route to Application
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:1.64204
6
HOP5 City:Local:192.168.143.106, ISP:Local:192.168.143.106, Latency:89.
553535
HOP10 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.7210
21
HOP11 City:Local:192.168.143.106, ISP:Local:192.168.143.106, Latency:7
1.90303
HOP17 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:38.799
095
HOP18 City:Local:192.168.143.106, ISP:Local:192.168.143.106, Latency:5
6.485596
HOP22 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:49.486
4
HOP23 City:Local:192.168.143.106, ISP:Local:192.168.143.106, Latency:2
6.280745
HOP27 City:Local:192.168.143.124, ISP:Local:192.168.143.124, Latency:20
5.40181
HOP28 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:99.483
82
HOP29 City:Local:192.168.143.124, ISP:Local:192.168.143.124, Latency:9
7.78077
Destination: Unknown, Unknown


ID: test_5689
Application: Amazon
Location and ISP: Seattle,WA / Comcast Cable
Type: Route to Application
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.86902
4
HOP8 City:Local:192.168.143.124, ISP:Local:192.168.143.124, Latency:41
8.04483
HOP14 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:69.207
96
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HOP15 City:Local:192.168.143.124, ISP:Local:192.168.143.124, Latency:2
8.93282
HOP20 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:20.020
569
HOP21 City:Local:192.168.143.124, ISP:Local:192.168.143.124, Latency:7
7.04517
HOP25 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:92.800
62
HOP26 City:Local:192.168.143.124, ISP:Local:192.168.143.124, Latency:10
7.16103
HOP31 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:1.0190
29
Destination: Ashburn, Amazon.com


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ID: test_1166
Application: Hulu
Location and ISP: Jersey City,NJ / Verizon Fios
Type: Route to Application
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.44301
3
HOP2 City:Local:192.168.1.1, ISP:Local:192.168.1.1, Latency:1.224035
HOP3 City:Boardman, ISP:Amazon.com, Latency:67.74598
Destination: Boardman, Amazon.com


ID: test_1166
Application: Hulu
Location and ISP: Jersey City,NJ / Verizon Fios
Type: Route to Application
HOP1 City:Local:192.168.143.1, ISP:Local:192.168.143.1, Latency:0.90502
7
HOP2 City:Local:192.168.1.1, ISP:Local:192.168.1.1, Latency:1.236036
HOP3 City:Boardman, ISP:Amazon.com, Latency:71.673096
HOP4 City:Local:192.168.143.194, ISP:Local:192.168.143.194, Latency:3.2
96096
HOP5 City:Boardman, ISP:Amazon.com, Latency:71.7231
HOP6 City:Local:192.168.143.194, ISP:Local:192.168.143.194, Latency:14.
773431
HOP7 City:Piscataway, ISP:ANS Communications, Latency:7.580222
HOP8 City:Seattle, ISP:Amazon.com, Latency:12.694371
HOP9 City:Ashburn, ISP:Amazon.com, Latency:11.30333
HOP10 City:Boardman, ISP:Amazon.com, Latency:0.546016
HOP11 City:Local:192.168.143.194, ISP:Local:192.168.143.194, Latency:1
4.475423
HOP12 City:Ashburn, ISP:Amazon.com, Latency:56.08364
HOP13 City:Seattle, ISP:Amazon.com, Latency:13.958408
HOP14 City:Local:192.168.143.194, ISP:Local:192.168.143.194, Latency:1
3.072381
HOP15 City:Ashburn, ISP:Amazon.com, Latency:60.898777
HOP16 City:Seattle, ISP:Amazon.com, Latency:89.83163
HOP17 City:Local:192.168.143.194, ISP:Local:192.168.143.194, Latency:33
0.38464
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HOP18 City:Seattle, ISP:Amazon.com, Latency:86.12951
HOP21 City:Local:192.168.143.194, ISP:Local:192.168.143.194, Latency:4.
815141
HOP22 City:Seattle, ISP:Amazon.com, Latency:66.98895
HOP23 City:Local:192.168.143.194, ISP:Local:192.168.143.194, Latency:5.
305155
HOP24 City:Boardman, ISP:Amazon.com, Latency:93.64574
HOP26 City:Local:192.168.143.194, ISP:Local:192.168.143.194, Latency:2
1.136616
HOP27 City:Boardman, ISP:Amazon.com, Latency:65.72992
Destination: Boardman, Amazon.com


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