



Executive Summary

Norton's Top 10 Riskiest Online Cities The U.S. cities under the greatest threat from cybercrime

Overview

Cybercrime is a growing threat that affects everyone who goes online for communication, shopping, banking, education, and entertainment. While we rarely see online threats that are noisy and massively spread in a matter of minutes or hours, cyberthreats are still a reality. In fact, cybercriminals' methods are devious, sophisticated and more organized than ever before. They hide behind phony emails, fake websites, hidden malware, and online ads. One wrong click is all it takes for thieves to steal your private information and then sell it to the highest bidder on the Internet black market. This study of Norton's Top 10 Riskiest Online Cities provides insight into the country's cities that are most vulnerable to today's cybercrime.

Norton from Symantec, the world's largest Internet security provider, teamed up with independent research firm Sperling's BestPlaces to find and expose Norton's Top 10 Riskiest Online Cities. These rankings investigate a number of factors in the largest U.S. cities, including:

- Cybercrimes data from Symantec Security Response:
 - Number of malicious attacks
 - Number of potential malware infections
 - Number of spam zombies
 - Number of bot infected computers
 - Level of Internet access
- Expenditures on computer hardware and software
- Wireless hotspots
- Broadband connectivity
- Internet usage
- Online purchases

Norton's Top Ten Riskiest Online Cities are –

Rank	City	State	Population	Score
1	Seattle	WA	590,810	188.2
2	Boston	MA	589,928	176.6
3	Washington	DC	582,559	174.0
4	San Francisco	CA	773,183	172.8
5	Raleigh	NC	353,433	167.0
6	Atlanta	GA	500,348	165.8
7	Minneapolis	MN	374,950	156.2
8	Denver	CO	573,485	152.9
9	Austin	TX	717,448	139.9
10	Portland	OR	551,257	137.9

(The rankings of the remainder of the 50 largest U.S. cities are presented at the end of this document.)

Seattle places first in the rankings to claim the title of Norton's Riskiest Online City, placing near the top in categories such as cybercrimes, risky online behavior and wireless Internet access.

Boston and Washington, D.C. follow in second and third place. Both cities experience a very high level of cybercrimes, perhaps due in part to their large number of WiFi hotspots.

High-tech hubs San Francisco and Raleigh are ranked fourth and fifth. San Francisco tops the list for riskiest online behavior and highest number of WiFi hotspots per capita. As part of North Carolina's "Research Triangle," Raleigh ranks among the leaders in overall Internet access and computer expenditures.

Rounding out the top 10 are Atlanta, Minneapolis, Denver, Austin and Portland, OR. Many of these cities are among the most tech-savvy places in the United States, proving that even skilled and experienced Internet users are at risk when it comes to cybercrime and online insecurity. According to Symantec's research, Atlanta ranks first in cybercrime, including spam zombies and potential malware infections. Minneapolis and Portland are near the top for risky online behavior, while Denver and Austin score highly across the board.

Profiles of the Top Ten places and factors contributing to their rankings

#1 - Seattle, WA

Seattle finished in the top spot by a wide margin, as it was the only city with top 10 scores in each of the study's categories. Seattle had the second-highest scores for risky behavior and WiFi hotspots, the third-highest scores for Internet access and consumer expenditures and the sixth-highest score for cybercrimes per capita.

Though Seattle receives high marks in nearly every category under consideration, a few figures stood out prominently. Nearly 68 percent (67.6 percent) of Seattleites are regular Internet users and almost 29 percent (28.5 percent) use it at least five times a day. Both of these figures were the highest among all cities in the study. In fact, these figures are 32.4 percent (for once a month) and 72.5 percent (for at least five times daily) higher than the average American city. Additionally, more people in Seattle use the Internet to check their bank statements and pay their bills (26.7 percent) than in any other of the 50 largest cities in the U.S. This percentage is 46.5 percent higher than the average American city. Seattle edges out San Francisco (62.9 percent to 62.3 percent) as the city with the highest percentage of email users. Finally, Seattleites are perhaps most unique for how frequently they access the Internet away from home. Over 19 percent of people (19.1) in Seattle use the Internet while on the road, whereas no other city even reaches 17 percent. This high percentage should not be surprising, since Seattle features over 103 WiFi hotspots per 100,000 people. Only San Francisco has more WiFi hotspots.

#2 - Boston, MA

Boston finished in second place overall due largely to its high levels of cybercrimes (5th place), risky behavior (4th place) and WiFi availability (8th place). It also ranked in the top 25 percent of all cities in Internet access and consumer expenditures.

Boston is especially beset by spam zombies (computers taken over by cybercriminals to send out spam); only two of the top 50 cities (Atlanta and Miami) have more spam zombies. Boston has 53.6 WiFi hotspots per 100,000 residents. Almost 60 percent (58.4 percent) of Bostonians use the Internet every month, nearly 50 percent (49.7 percent) have broadband Internet connections and over 27 percent (27.4 percent) use it regularly for purchases. These stats are 14.5 percent, 25.9 percent and 9.3 percent higher, respectively, than in the average American city. The average Boston resident spends nearly \$240 annually on computer-related purchases (\$209.07 on hardware and \$29.48 on software).

#3 - Washington, DC

Our nation's capital is also one of its capitals of cybercrime, as it ranked third overall due to high scores in all of the categories. It ranked fourth in cybercrimes, fifth in WiFi hotspots, eighth in consumer expenditures and Internet access and eleventh in risky behavior, as defined by the amount and type of Internet usage.

DC residents are heavy users of online shopping sites; 12.9 percent of residents (39.6 percent higher than average) use it to make purchases. Washingtonians spend an annual average of \$215.29 on computer hardware and \$30.33 on software. The city has 78.8 WiFi hotspots per 100,000 residents. Twenty-two percent of residents use the Internet at least five times a day, which is 39.1 percent higher than average. Washington is the city with the fourth-most spam zombies, malicious attacks and potential infections.

#4 - San Francisco, CA

It may come as a surprise that this high-tech hub ranked fourth overall, but San Francisco received the highest marks among all cities for risky behavior and WiFi hotspots and the second highest marks for Internet access and consumer expenditures. It was only a relatively low number of cybercrimes that prevented San Francisco from claiming the top spot overall.

San Francisco has nearly 113 WiFi hotspots per 100,000 residents. To put this in perspective, that figure is over 360 percent higher than the average city! The average San Franciscan spends over \$300 annually on computer hardware (\$311.77) and nearly \$50 per year on software (\$47.64). More people in San Francisco have broadband Internet connections (59.8 percent) than in any other city. This figure is 51.5 percent higher than the typical American city. San Franciscans also spend more time making purchases on online shopping websites than residents of any other top 50 city. In fact, more people in San Francisco use the Internet at least once a day (over 56 percent) than in any other city on the list. Finally, 62.3 percent of residents use email; that is 39.3 percent higher than the American average.

#5 - Raleigh, NC

Raleigh's fifth place finish is the result of high marks in Internet access (7th), consumer expenditures (7th) and risky behavior (6th). Lower scores in cybercrimes (11th) and WiFi hotspots (22nd) prevented Raleigh from finishing any higher in the overall rankings.

Residents of Raleigh spend over \$260 per year on computer hardware and software. Nearly 70 percent of residents (69.0 percent) have Internet access and almost 60 percent use it each month (59.8 percent). Raleigh residents are very comfortable using the Internet for financial transactions, with 22 percent of people using it to pay bills and nearly 30 percent (29.3 percent) using it to make purchases from online shopping sites. These figures are 34.5 percent and 16.8 percent higher than the American average. Raleigh has the third-highest percentage of people who use the Internet at least once a day (47.0 percent).

#6 - Atlanta, GA

Atlanta's sixth place finish was largely the result of its having the highest number of cybercrimes per capita in the United States. Atlanta also scored highly in WiFi hotspots (3rd place). Lower scores in the other three categories kept it from moving closer to the top of the overall rankings.

In addition to being the overall leader in reported cybercrime, Atlanta has the most spam zombies and bots and the second most attacks and potential infections of any city in the top 50. Atlanta has nearly 94 WiFi hotspots per 100,000 residents. Residents are heavy users of online shopping sites (44.2 percent higher than average) and 46.6 percent more likely to use the Internet away from home than average. They are also 26.2 percent more likely to use the Internet at least five times per day.

#7 - Minneapolis, MN

Minneapolis received fairly high marks across the board, finishing in the top ten in cybercrimes, risky behavior and WiFi hotspots (9th place for each of these categories).

Minneapolis has 43.5 WiFi hotspots per 100,000 residents, which is 39 percent more than the average from the top 50 cities in the study. Residents spend \$201.37 on hardware and \$28.53 on software on average each year. Over 58 percent (58.1 percent) of residents use the Internet each month, which is percent above average. Nearly 10 percent of residents (9.6 percent) use the Internet outside their homes and over 21 percent (21.3 percent) use the Internet for financial reasons. These figures are 48.2 and 30.4 percent above average.

#8 - Denver, CO

Denver ranked eighth overall due largely to its high number of cybercrimes (7th). Denver ranks fifth in terms of spam zombies and bots per capita. Over 21 percent (21.3 percent) of its residents use the Internet at least five times per day, which is 28.7 percent above average, and 9.6 percent use the Internet away from home, which is 29.1 percent above average. Over 44 percent (44.5 percent) of Denver residents have broadband connections.

#9 - Austin, TX

Although Austin finished in the middle of the pack in terms of cybercrimes, its high scores in the other four categories resulted in a ninth place finish. Austin residents spend an annual average of \$224.50 on hardware and \$32.24 on software. Over 22 percent (22.5 percent) use the Internet at least five times per day, which is 36.0 percent above average. Nearly 9 percent (8.9 percent) use the Internet away from home, which is 37.1 percent above average, 21.1 percent use the Internet for financial transactions (29 percent above average) and 45.9 percent have broadband connections, which is 16.1 percent above average.

#10 - Portland, OR

Portland sneaks into the top 10 as a result of very high scores in risky behavior (5th) and WiFi hotspots (4th). Portland has over 83 WiFi hotspots per 100,000 residents, which is 266 percent greater than the average of the top 50 cities. Over 53 percent (53.7 percent) of Portland residents use email, which is 20.1 percent above average, and 30.1 percent of its residents purchase items online (20.2 percent above average). Online auctions are especially popular with Portlanders, as 8 percent of residents use them to buy things (20.7 percent above average).

Methodology

These are the categories used for the study:

- Number (per capita) of malicious attacks
- Number (per capita) of potential malware infections
- Number (per capita) of spam zombies
- Number (per capita) of bot infected machines
- Number (per capita) of places that offer free wi-fi
- Prevalence of computer use, based on consumer expenditures for computer hardware and software
- Prevalence of internet use, based on consumer expenditures for internet access
- Percentage of the city population engaging in computer risky computer use, such as online purchases, email, and accessing financial information.

Scoring

Each city in the study received points for each of the criteria based on their relation to the other cities' scores in that data category. To maintain consistency throughout the study, the most significant data element for any given category that which implied the conditions most conducive to or indicative of the cyber threat received a score of 100 points. Alternatively, the data element for any given category which is associated with the least threat earned a score of 0 points.

The cities were assigned point values between 0 and 100 based on their data element's percentage of the range between the most desirable score in that category and the least desirable score in that category. In this way, the point values assigned to the cities preserve the proportionality of the data points in relation to the data set while providing a common point scale.

Category scores are weighted and aggregated to determine an overall score for each city, which were then sorted and ranked.

Cities

For this study, we analyzed the 50 largest cities in the United States, by population defined by the U.S. Census Bureau.

Sources

Symantec Security Response Data

To determine the cities of origin of malicious activity, Symantec cross-references the IP addresses of computers carrying out malicious activity with several third-party subscription-based databases that link the geographic location of systems to IP addresses. The data produced is then used to determine the city where computers carrying out malicious activity are located.

Categories used for this study, and classified as ‘cybercrimes’ throughout:

- Malicious attacks – Attacks that are used to break into a computer. They can come over the Internet, through a Web page, or through web-based content like PDFs. They aren’t malicious code files specifically, but they are designed to break into a computer to potentially install malicious code, steal information, or use the target computer for nefarious activity.
- Potential malware infections – Malicious code, such as a virus, worm, or Trojan horse.
- Spam zombies – Computers that are dedicated to sending spam.
- Botnets – Bot infected computers conduct coordinated scanning and attack activity, which is observed in global network traffic. An active bot infected computer is one that carries out at least one attack per day. Attacks are defined as any malicious activity carried out over a network that has been detected by an intrusion detection system (IDS) or firewall.

WiFi Hotspots

We used the number of free WiFi hotspots for each city, reported by JiWire, a leading provider of WiFi locations. We used the city population to create a per-capita metric of WiFi availability for each city.

From the JiWire.com website -

“Since 2003, we have been assembling and publishing the world's largest, most comprehensive database of free and paid public Wi-Fi hotspots. It contains the location attributes and data points for more than 250,000 Wi-Fi hotspots across 140 countries. We collect hotspot data from 400+ Wireless ISPs around the globe, data that is disparate and often poorly formatted. We standardize that data and then geo-code it through integration with leading mapping providers like Google Earth, Yahoo! Maps and MapQuest.”

<http://www.jiwire.com>

Consumer Expenditures

We used the Consumer Expenditures as a percent of each area’s total household expenditures, to assess which places devoted a larger or smaller amount of their discretionary income for online activity.

Categories included for Consumer Expenditures:

- Computer Information Services
- Internet Services Away from Home
- Computers & Hardware for Home Use
- Software & Accessories for Home Use

We licensed this data from ESRI, Inc.

“ESRI has combined the latest Consumer Expenditure Surveys (CEX), from the Bureau of Labor Statistics (BLS) to estimate current spending patterns. The continuing surveys include a Diary Survey for daily purchases and an Interview Survey for general purchases. The Diary Survey represents record keeping by consumer units for two consecutive weeklong periods. This component of the CEX collects data on small, daily purchases that could be overlooked by the quarterly Interview Survey. The Interview Survey collects expenditure data from consumers in five interviews conducted every three months. ESRI integrates data from both surveys to provide a comprehensive database on all consumer expenditures. To compensate for the relatively small CEX survey bases and the variability of single-year data, expenditures are averaged from the surveys.”

http://www.esri.com/data/esri_data/consumer.html

Consumer Behavior

We used the Market Potential index to measure the demand for a product or service in a defined geographic area. More than 2,000 items from the Mediamark Research Inc. Doublebase 2008 consumer survey are grouped into 35 categories of goods, services, and attitudes.

Updated annually, this database also includes the expected number of consumers and a Market Potential Index (MPI) that measures the likelihood that adult households in a specified area will exhibit certain consumer behaviors compared to the U.S. national average

Categories included for Consumer Behavior:

- Have any access to the Internet
- Connection to Internet from home: any broadband
- Any Internet or online usage in last 30 days
- Use Internet less than once a week
- Use Internet 1-2 times per week
- Use Internet 3-6 times per week
- Use Internet once a day
- Use Internet 2-4 times per day
- Use Internet 5 or more times per day
- Used Internet/30 days:away from home or work
- Internet last 30 days: used email
- Internet last 30 days: made personal purchase
- Internet last 30 days: made business purchase
- Ordered anything on Internet in last 12 months
- Purchased item from online shopping site in last 12 months
- Purchased item from online auction in last 12 months
- Internet last 30 days: obtained financial info

We licensed this data from ESRI, Inc.

“ESRI calculates Market Potential by combining ESRI’s Community™ Tapestry™ segmentation system and 2008 Doublebase data from Mediamark Research Inc. Because each survey respondent can be identified by Community Tapestry segment, a rate of consumption by segment can be determined for a product or service for any area. The Expected Number of Consumers (households or adults) for a product or service in an area is computed by applying the consumption rate for Community Tapestry market

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to the households or adults in the area belonging to Community Tapestry, and summing across all Community Tapestry segments.”
http://www.esri.com/data/esri_data/market-potential.html

Complete Rankings – Cybercrime Cities (50 largest U.S. cities)

Riskiest Cities Rank	Population	Total Score	Cybercrime Data Rank	Internet Access Rank	Expenditure Rank	Behavior Rank	WiFi Rank	
1	Seattle, WA	590,810	188.2	6	3	3	2	2
2	Boston, MA	589,928	176.6	5	12	12	4	8
3	Washington, DC	582,559	174.0	4	8	8	11	5
4	San Francisco, CA	773,183	172.8	17	2	2	1	1
5	Raleigh, NC	353,433	167.0	11	7	7	6	22
6	Atlanta, GA	500,348	165.8	1	16	16	16	3
7	Minneapolis, MN	374,950	156.2	9	20	20	9	9
8	Denver, CO	573,485	152.9	7	19	19	14	17
9	Austin, TX	717,448	139.9	23	9	9	12	14
10	Portland, OR	551,257	137.9	25	18	18	5	4
11	Honolulu, HI	377,912	135.4	36	5	5	3	6
12	Charlotte, NC	620,583	134.4	26	4	4	13	34
13	Las Vegas, NV	568,890	133.0	18	15	15	20	11
14	San Diego, CA	1,306,841	124.1	38	6	6	7	15
15	Colorado Springs, CO	373,941	117.5	35	11	11	10	31
16	Sacramento, CA	467,591	116.8	10	36	36	26	12
17	Pittsburgh, PA	308,515	113.8	8	42	42	27	7
18	Oakland, CA	406,046	112.0	32	10	10	22	13
19	Nashville-Davidson, TN	556,966	111.1	24	23	23	19	35
20	San Jose, CA	954,265	110.3	43	1	1	15	20
21	Columbus, OH	733,342	105.7	22	32	32	18	38
22	Dallas, TX	1,238,033	104.4	14	22	22	38	37
23	Kansas City, MO	450,822	103.2	15	34	34	29	30
24	New York, NY	8,244,086	99.8	33	14	14	21	43
25	Indianapolis, IN	787,013	97.5	19	30	30	30	42
26	Albuquerque, NM	510,340	96.9	34	25	25	17	27
27	Miami, FL	419,637	96.1	2	47	47	45	10
28	Omaha, NE	390,178	95.6	28	27	27	25	23
29	Virginia Beach, VA	436,053	91.8	50	13	13	8	39
30	Los Angeles, CA	3,955,935	91.3	27	21	21	32	40
31	Cincinnati, OH	330,480	90.8	12	45	45	35	25
32	Houston, TX	2,126,982	88.3	21	28	28	40	18
33	St. Louis, MO	354,550	86.9	3	49	49	47	24
34	Phoenix, AZ	1,515,284	86.2	31	17	17	33	48
35	Chicago, IL	2,811,966	82.4	29	24	24	37	19
36	Baltimore, MD	638,119	77.5	13	46	46	44	21
37	Oklahoma City, OK	546,774	71.7	30	38	38	31	33
38	Philadelphia, PA	1,434,790	71.5	16	44	44	43	41
39	Jacksonville, FL	826,778	66.2	44	26	26	24	50
40	Tulsa, OK	381,727	56.8	48	31	31	23	44
41	San Antonio, TX	1,275,530	54.6	37	37	37	39	16
42	Milwaukee, WI	571,845	54.4	39	35	35	36	29
43	Cleveland, OH	436,574	53.8	20	50	50	49	32
44	Tucson, AZ	531,502	47.6	46	41	41	28	26
45	Long Beach, CA	482,521	46.8	49	29	29	34	28
46	Fort Worth, TX	641,386	45.2	40	33	33	41	47

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47	Fresno, CA	474,356	38.5	41	39	39	42	36
48	Memphis, TN	632,191	27.9	42	40	40	46	49
49	El Paso, TX	611,978	18.7	45	43	43	48	45
50	Detroit, MI	852,782	7.5	47	48	48	50	46

Rank of individual cybercrimes, by city

Riskiest Cities Rank	Name	Population	Cybercrime Data Rank	-Spam Zombies	Bots	Attacks	Potential Infections
1	Seattle, WA	590,810	6	6	6	5	10
2	Boston, MA	589,928	5	3	4	6	7
3	Washington, DC	582,559	4	4	13	4	4
4	San Francisco, CA	773,183	17	16	11	24	26
5	Raleigh, NC	353,433	11	14	10	9	8
6	Atlanta, GA	500,348	1	1	1	2	2
7	Minneapolis, MN	374,950	9	10	15	10	5
8	Denver, CO	573,485	7	5	5	8	12
9	Austin, TX	717,448	23	34	14	22	24
10	Portland, OR	551,257	25	22	34	17	37
11	Honolulu, HI	377,912	36	37	35	40	25
12	Charlotte, NC	620,583	26	30	31	25	21
13	Las Vegas, NV	568,890	18	23	20	13	14
14	San Diego, CA	1,306,841	38	42	33	32	33
15	Colorado Springs, CO	373,941	35	26	45	37	34
16	Sacramento, CA	467,591	10	12	9	7	11
17	Pittsburgh, PA	308,515	8	11	8	11	6
18	Oakland, CA	406,046	32	38	17	30	38
19	Nashville-Davidson, TN	556,966	24	17	29	28	27
20	San Jose, CA	954,265	43	35	32	47	42
21	Columbus, OH	733,342	22	25	24	23	22
22	Dallas, TX	1,238,033	14	7	22	26	16
23	Kansas City, MO	450,822	15	18	7	19	17
24	New York, NY	8,244,086	33	32	26	39	36
25	Indianapolis, IN	787,013	19	31	21	16	13
26	Albuquerque, NM	510,340	34	21	43	31	40
27	Miami, FL	419,637	2	2	2	1	1
28	Omaha, NE	390,178	28	29	40	15	30
29	Virginia Beach, VA	436,053	50	50	50	49	49
30	Los Angeles, CA	3,955,935	27	24	28	29	29
31	Cincinnati, OH	330,480	12	19	12	12	9
32	Houston, TX	2,126,982	21	33	16	27	19
33	St. Louis, MO	354,550	3	8	3	3	3
34	Phoenix, AZ	1,515,284	31	27	30	36	35
35	Chicago, IL	2,811,966	29	28	27	33	28
36	Baltimore, MD	638,119	13	9	19	18	18
37	Oklahoma City, OK	546,774	30	45	23	14	23
38	Philadelphia, PA	1,434,790	16	13	18	21	15
39	Jacksonville, FL	826,778	44	43	41	41	44
40	Tulsa, OK	381,727	48	49	49	42	48
41	San Antonio, TX	1,275,530	37	36	25	38	41
42	Milwaukee, WI	571,845	39	40	39	35	32
43	Cleveland, OH	436,574	20	15	37	20	20
44	Tucson, AZ	531,502	46	47	47	43	45
45	Long Beach, CA	482,521	49	48	48	50	50
46	Fort Worth, TX	641,386	40	20	42	46	46
47	Fresno, CA	474,356	41	46	36	34	39
48	Memphis, TN	632,191	42	39	38	44	31
49	El Paso, TX	611,978	45	41	44	45	47
50	Detroit, MI	852,782	47	44	46	48	43

WiFi ranks, hotspots, and hotspots per capita, by city

Riskiest Cities Rank	City, State	Population	WiFi rank	WiFi per 100K	WiFi Hotspots
1	Seattle, WA	590,810	2	103.2	610
2	Boston, MA	589,928	8	53.6	316
3	Washington, DC	582,559	5	78.8	459
4	San Francisco, CA	773,183	1	112.7	871
5	Raleigh, NC	353,433	22	25.5	90
6	Atlanta, GA	500,348	3	93.9	470
7	Minneapolis, MN	374,950	9	43.5	163
8	Denver, CO	573,485	17	33.1	190
9	Austin, TX	717,448	14	35.4	254
10	Portland, OR	551,257	4	83.3	459
11	Honolulu, HI	377,912	6	69.1	261
12	Charlotte, NC	620,583	34	18.2	113
13	Las Vegas, NV	568,890	11	37.6	214
14	San Diego, CA	1,306,841	15	34.7	454
15	Colorado Springs, CO	373,941	31	21.1	79
16	Sacramento, CA	467,591	12	36.6	171
17	Pittsburgh, PA	308,515	7	54.8	169
18	Oakland, CA	406,046	13	36.4	148
19	Nashville-Davidson, TN	556,966	35	15.4	86
20	San Jose, CA	954,265	20	27.2	260
21	Columbus, OH	733,342	38	14.3	105
22	Dallas, TX	1,238,033	37	14.4	178
23	Kansas City, MO	450,822	30	21.3	96
24	New York, NY	8,244,086	43	10.8	887
25	Indianapolis, IN	787,013	42	11.2	88
26	Albuquerque, NM	510,340	27	22.9	117
27	Miami, FL	419,637	10	41.0	172
28	Omaha, NE	390,178	23	25.4	99
29	Virginia Beach, VA	436,053	39	13.5	59
30	Los Angeles, CA	3,955,935	40	12.9	512
31	Cincinnati, OH	330,480	25	24.2	80
32	Houston, TX	2,126,982	18	30.8	656
33	St. Louis, MO	354,550	24	25.1	89
34	Phoenix, AZ	1,515,284	48	8.0	121
35	Chicago, IL	2,811,966	19	27.9	785
36	Baltimore, MD	638,119	21	26.8	171
37	Oklahoma City, OK	546,774	33	18.8	103
38	Philadelphia, PA	1,434,790	41	12.1	173
39	Jacksonville, FL	826,778	50	5.9	49
40	Tulsa, OK	381,727	44	10.7	41
41	San Antonio, TX	1,275,530	16	34.2	436
42	Milwaukee, WI	571,845	29	22.6	129
43	Cleveland, OH	436,574	32	20.8	91
44	Tucson, AZ	531,502	26	24.1	128
45	Long Beach, CA	482,521	28	22.8	110
46	Fort Worth, TX	641,386	47	8.4	54
47	Fresno, CA	474,356	36	15.2	72
48	Memphis, TN	632,191	49	6.5	41
49	El Paso, TX	611,978	45	8.8	54
50	Detroit, MI	852,782	46	8.6	73

Annual expenditures per household on Internet Access and Computers

Riskiest Cities Rank	Name	Home net access \$	Away net access \$	PC	
				hardware \$	PC software \$
1	Seattle, WA	\$308.10	\$5.37	\$278.03	\$40.39
2	Boston, MA	\$233.09	\$4.23	\$209.07	\$29.48
3	Washington, DC	\$242.71	\$4.32	\$215.29	\$30.33
4	San Francisco, CA	\$332.74	\$6.22	\$311.77	\$47.64
5	Raleigh, NC	\$250.31	\$4.23	\$228.03	\$32.56
6	Atlanta, GA	\$228.14	\$3.94	\$204.01	\$29.01
7	Minneapolis, MN	\$223.00	\$3.72	\$201.37	\$28.53
8	Denver, CO	\$221.87	\$3.85	\$200.63	\$29.29
9	Austin, TX	\$246.06	\$4.23	\$224.50	\$32.24
10	Portland, OR	\$226.06	\$3.85	\$201.52	\$29.07
11	Honolulu, HI	\$256.07	\$4.68	\$239.76	\$36.66
12	Charlotte, NC	\$271.45	\$4.61	\$245.07	\$35.16
13	Las Vegas, NV	\$235.20	\$4.04	\$211.74	\$30.83
14	San Diego, CA	\$247.33	\$4.50	\$228.83	\$34.01
15	Colorado Springs, CO	\$242.61	\$4.09	\$218.22	\$31.53
16	Sacramento, CA	\$189.83	\$3.25	\$171.71	\$24.94
17	Pittsburgh, PA	\$174.72	\$2.74	\$154.24	\$21.48
18	Oakland, CA	\$235.54	\$4.35	\$214.14	\$31.72
19	Nashville-Davidson, TN	\$220.50	\$3.59	\$195.98	\$27.76
20	San Jose, CA	\$366.39	\$6.81	\$346.60	\$53.18
21	Columbus, OH	\$200.12	\$3.29	\$179.35	\$25.32
22	Dallas, TX	\$215.29	\$3.75	\$193.55	\$28.04
23	Kansas City, MO	\$201.74	\$3.24	\$178.17	\$25.12
24	New York, NY	\$230.21	\$4.18	\$199.63	\$28.04
25	Indianapolis, IN	\$210.47	\$3.37	\$186.28	\$26.30
26	Albuquerque, NM	\$215.43	\$3.58	\$192.59	\$27.79
27	Miami, FL	\$154.03	\$2.74	\$137.74	\$20.03
28	Omaha, NE	\$213.68	\$3.45	\$188.93	\$26.73
29	Virginia Beach, VA	\$240.51	\$4.07	\$214.98	\$30.99
30	Los Angeles, CA	\$208.11	\$3.94	\$193.84	\$29.27
31	Cincinnati, OH	\$170.84	\$2.74	\$151.83	\$21.10
32	Houston, TX	\$203.75	\$3.53	\$183.19	\$26.56
33	St. Louis, MO	\$149.52	\$2.31	\$130.52	\$17.83
34	Phoenix, AZ	\$226.90	\$3.90	\$204.78	\$29.79
35	Chicago, IL	\$209.67	\$3.76	\$186.91	\$27.00
36	Baltimore, MD	\$160.26	\$2.70	\$136.25	\$18.46
37	Oklahoma City, OK	\$194.19	\$3.10	\$172.10	\$24.40
38	Philadelphia, PA	\$167.38	\$2.80	\$141.01	\$18.91
39	Jacksonville, FL	\$215.59	\$3.51	\$191.20	\$27.24
40	Tulsa, OK	\$205.35	\$3.34	\$182.39	\$25.90
41	San Antonio, TX	\$191.19	\$3.19	\$170.58	\$24.35
42	Milwaukee, WI	\$198.85	\$3.16	\$175.10	\$24.31
43	Cleveland, OH	\$136.91	\$2.08	\$118.90	\$16.09
44	Tucson, AZ	\$170.59	\$2.82	\$153.21	\$21.86
45	Long Beach, CA	\$194.61	\$3.67	\$180.08	\$26.92
46	Fort Worth, TX	\$199.62	\$3.29	\$177.93	\$25.34
47	Fresno, CA	\$170.15	\$2.94	\$154.70	\$22.50
48	Memphis, TN	\$175.19	\$2.81	\$152.69	\$21.36
49	El Paso, TX	\$167.93	\$2.81	\$149.66	\$21.48
50	Detroit, MI	\$152.04	\$2.34	\$128.75	\$17.52

Adult internet use (100 = U.S. average, 120 = 20% greater than norm)

Riskiest Cities Rank	Name	Any Internet use	Net use - once daily	Net use - 5+ times daily	Use email	Online purchases	Online financial transaction	Broadband connect
1	Seattle, WA	120.4	119.4	172.5	140.5	144.8	163.7	146.3
2	Boston, MA	109.8	101.6	142.9	118.4	109.3	119.8	125.9
3	Washington, DC	108.8	97.8	139.1	113.8	106.9	120.4	119.4
4	San Francisco, CA	119.9	118.9	171.4	139.3	145.3	155.9	151.5
5	Raleigh, NC	110.1	107.0	137.2	119.7	116.8	134.5	121.6
6	Atlanta, GA	103.0	89.6	126.2	103.9	102.2	116.4	105.4
7	Minneapolis, MN	108.2	108.2	137.5	117.2	114.0	130.4	116.4
8	Denver, CO	101.8	100.0	128.7	111.2	110.5	125.0	112.6
9	Austin, TX	104.8	104.0	136.0	115.1	110.9	129.0	116.1
10	Portland, OR	110.0	111.0	133.6	120.1	120.2	132.8	121.2
11	Honolulu, HI	110.1	116.0	134.5	120.3	121.6	133.0	132.0
12	Charlotte, NC	105.5	104.2	128.1	112.9	112.1	126.3	115.3
13	Las Vegas, NV	98.6	97.7	113.6	105.1	106.0	113.3	107.1
14	San Diego, CA	103.7	101.8	136.0	115.3	114.3	130.8	123.4
15	Colorado Springs, CO	105.7	109.6	127.8	116.1	118.7	129.4	120.0
16	Sacramento, CA	95.9	95.5	104.2	98.6	96.0	102.6	100.0
17	Pittsburgh, PA	104.0	93.5	101.8	97.2	91.7	97.0	97.1
18	Oakland, CA	96.5	90.7	104.0	98.8	91.4	97.7	104.9
19	Nashville-Davidson, TN	105.3	105.4	112.9	107.2	101.4	113.9	106.8
20	San Jose, CA	98.7	98.4	111.1	104.9	105.4	111.4	116.2
21	Columbus, OH	104.0	101.8	118.0	107.0	101.8	115.1	107.5
22	Dallas, TX	88.1	80.9	95.3	87.2	79.4	93.3	87.3
23	Kansas City, MO	99.5	96.5	98.7	96.2	93.1	100.4	96.5
24	New York, NY	98.0	98.3	108.8	97.6	86.0	92.4	109.6
25	Indianapolis, IN	99.4	100.5	96.9	96.7	91.5	99.5	96.2
26	Albuquerque, NM	102.4	103.9	112.9	107.2	107.3	114.3	108.3
27	Miami, FL	87.2	76.7	78.1	79.2	68.2	72.5	79.7
28	Omaha, NE	100.7	101.3	101.1	99.8	97.4	103.1	100.5
29	Virginia Beach, VA	107.6	114.2	125.5	118.4	117.5	131.4	122.4
30	Los Angeles, CA	87.8	83.6	94.5	89.8	82.5	92.1	96.7
31	Cincinnati, OH	99.4	94.7	99.1	94.2	86.0	96.4	92.3
32	Houston, TX	88.4	82.3	92.9	86.8	79.9	90.8	87.0
33	St. Louis, MO	92.4	85.4	79.0	79.6	72.1	76.0	77.4
34	Phoenix, AZ	90.8	90.1	98.7	93.6	90.9	98.5	94.5
35	Chicago, IL	93.4	87.5	93.5	90.4	80.7	88.4	94.9
36	Baltimore, MD	94.1	88.8	90.7	83.7	70.0	90.4	82.1
37	Oklahoma City, OK	98.9	101.0	95.9	96.1	92.3	97.5	95.6
38	Philadelphia, PA	93.7	88.9	94.0	84.0	72.2	91.9	83.4
39	Jacksonville, FL	101.0	101.9	98.7	100.1	94.6	105.0	100.7
40	Tulsa, OK	101.4	102.7	102.8	100.8	96.5	104.3	101.0
41	San Antonio, TX	90.2	88.0	91.2	88.3	83.4	89.8	87.6
42	Milwaukee, WI	97.5	95.7	95.1	93.4	90.6	94.1	92.7
43	Cleveland, OH	86.0	79.1	63.4	68.6	59.5	60.0	65.0
44	Tucson, AZ	97.8	98.2	101.0	98.3	92.4	99.8	97.3
45	Long Beach, CA	87.3	83.9	95.2	89.4	82.6	92.7	95.4
46	Fort Worth, TX	90.6	89.4	89.3	87.6	81.5	90.3	86.9
47	Fresno, CA	83.8	80.7	87.8	83.8	80.7	84.6	84.3
48	Memphis, TN	92.1	82.6	76.6	80.5	71.1	80.5	79.5
49	El Paso, TX	82.2	78.6	74.6	77.1	71.5	72.1	76.3
50	Detroit, MI	81.9	63.5	47.8	58.8	45.2	51.0	56.6

Percent of adults engaging in internet activity (75.1 = 75.1% of adults in city)

Riskiest Cities Rank	Name	Any Internet use	Net use - once daily	Net use - 5+ times daily	Use email	Online purchases	Online financial transaction	Broadband connect
1	Seattle, WA	75.4	2.0	28.5	62.9	36.3	26.7	57.8
2	Boston, MA	68.8	2.5	23.6	53.0	27.4	19.6	49.7
3	Washington, DC	68.2	2.6	23.0	50.9	26.8	19.7	47.2
4	San Francisco, CA	75.1	1.7	28.3	62.3	36.4	25.4	59.8
5	Raleigh, NC	69.0	2.7	22.7	53.6	29.3	22.0	48.0
6	Atlanta, GA	64.5	2.7	20.9	46.5	25.6	19.0	41.6
7	Minneapolis, MN	67.8	2.6	22.7	52.4	28.6	21.3	46.0
8	Denver, CO	63.8	2.4	21.3	49.8	27.7	20.4	44.5
9	Austin, TX	65.6	2.5	22.5	51.5	27.8	21.1	45.9
10	Portland, OR	68.9	2.4	22.1	53.7	30.1	21.7	47.9
11	Honolulu, HI	69.0	2.0	22.2	53.8	30.5	21.7	52.1
12	Charlotte, NC	66.1	2.6	21.2	50.5	28.1	20.6	45.5
13	Las Vegas, NV	61.8	2.6	18.8	47.0	26.6	18.5	42.3
14	San Diego, CA	64.9	2.2	22.5	51.6	28.7	21.3	48.7
15	Colorado Springs, CO	66.2	2.5	21.1	52.0	29.8	21.1	47.4
16	Sacramento, CA	60.1	2.7	17.2	44.1	24.1	16.7	39.5
17	Pittsburgh, PA	65.2	3.5	16.8	43.5	23.0	15.8	38.3
18	Oakland, CA	60.5	2.7	17.2	44.2	22.9	16.0	41.4
19	Nashville-Davidson, TN	65.9	3.1	18.7	48.0	25.4	18.6	42.2
20	San Jose, CA	61.8	2.0	18.4	46.9	26.4	18.2	45.9
21	Columbus, OH	65.1	3.0	19.5	47.9	25.5	18.8	42.5
22	Dallas, TX	55.2	2.7	15.7	39.0	19.9	15.2	34.5
23	Kansas City, MO	62.3	3.1	16.3	43.0	23.3	16.4	38.1
24	New York, NY	61.4	2.5	18.0	43.7	21.6	15.1	43.3
25	Indianapolis, IN	62.2	3.2	16.0	43.3	22.9	16.2	38.0
26	Albuquerque, NM	64.2	2.8	18.7	48.0	26.9	18.7	42.8
27	Miami, FL	54.6	3.1	12.9	35.4	17.1	11.8	31.5
28	Omaha, NE	63.1	3.1	16.7	44.7	24.4	16.8	39.7
29	Virginia Beach, VA	67.4	2.7	20.7	53.0	29.5	21.5	48.3
30	Los Angeles, CA	55.0	2.6	15.6	40.2	20.7	15.0	38.2
31	Cincinnati, OH	62.3	3.1	16.4	42.2	21.6	15.7	36.4
32	Houston, TX	55.4	2.7	15.4	38.8	20.0	14.8	34.4
33	St. Louis, MO	57.9	3.2	13.1	35.6	18.1	12.4	30.6
34	Phoenix, AZ	56.9	2.6	16.3	41.9	22.8	16.1	37.3
35	Chicago, IL	58.5	2.8	15.5	40.4	20.2	14.4	37.5
36	Baltimore, MD	58.9	3.2	15.0	37.5	17.5	14.8	32.4
37	Oklahoma City, OK	61.9	3.2	15.9	43.0	23.1	15.9	37.7
38	Philadelphia, PA	58.7	3.2	15.5	37.6	18.1	15.0	32.9
39	Jacksonville, FL	63.2	3.4	16.3	44.8	23.7	17.1	39.8
40	Tulsa, OK	63.5	3.1	17.0	45.1	24.2	17.0	39.9
41	San Antonio, TX	56.5	2.7	15.1	39.5	20.9	14.7	34.6
42	Milwaukee, WI	61.1	3.0	15.7	41.8	22.7	15.4	36.6
43	Cleveland, OH	53.9	3.5	10.5	30.7	14.9	9.8	25.7
44	Tucson, AZ	61.2	3.0	16.7	44.0	23.2	16.3	38.4
45	Long Beach, CA	54.7	2.4	15.7	40.0	20.7	15.1	37.7
46	Fort Worth, TX	56.7	2.8	14.7	39.2	20.4	14.7	34.3
47	Fresno, CA	52.5	2.6	14.5	37.5	20.2	13.8	33.3
48	Memphis, TN	57.7	3.3	12.7	36.0	17.8	13.1	31.4
49	El Paso, TX	51.5	2.7	12.3	34.5	17.9	11.8	30.1
50	Detroit, MI	51.3	3.6	7.9	26.3	11.3	8.3	22.4