Proxy Market Research 2020

PROXYWAY

/ Introduction

Dozens of industries rely on proxy server networks to create value for customers, run services and automate various tasks. As more companies strive to base their operations on data and accessibility, the quality and scale of proxy networks become critical components of entire industries.

Nevertheless, little to no real testing solutions exist to determine the quality of these networks. Even when some enthusiasts run a couple of connectivity tests for a given provider, the viability of the product for a particular market remains debatable. This state of affairs seems dormant, as few businesses want to publicly admit to using proxy networks due to their association with hackers and social media manipulation.

Last year, Proxyway conducted the first ever benchmark testing of every major commercial proxy network in the world. The extensive final report showed how varied in quality these networks actually were, as well as how many ways there were to actually test them.

A major finding of last year's study was that there was no clear consensus of what makes one proxy network better than the others. We received feedback from our readers and companies from various industries, including data mining, marketing, communications, SEO, application development, etc. This feedback marked a pivotal moment in Proxyway's research activities, as we realized that the quality of a proxy network depends solely on why and how someone uses it. For instance, a rapid network of proxies with a low connection success rate might be better than a slow network with a higher connection rate for some uses.

Thus, this year Proxyway reached out to 313 experts in 6 major industries that use proxy networks:
1. data scraping,
2. digital advertisement
3. data aggregation,
4. digital marketing and market research,
5. SEO,
6. application development and localization.

Each of these industries use proxies in a unique way. For example, even though data scraping technologies are used in SEO, data aggregation and market research, their data sources, goals and requirements for proxies are different. An SEO scraper might need local servers to target search engines, while a data aggregator will only gather information from a travel site.

Over the period of two months, 191 experts answered questions about how and why they use proxies to run their businesses. They rated essential proxy qualities, helped Proxyway to define the testing criteria and benchmarks. Unfortunately, very few of these experts agreed to be named in this report. Most of them chose to remain anonymous in light of the controversial public perception of proxies and their unwillingness to expose more of the inner workings of their businesses. We hope that this report will be a strong first step in bringing more transparency to these industries, as well as changing the way the public perceives proxy networks.

We tested the 9 largest proxy networks and evaluated their performance for each use case separately. Expert surveys provided a firm foundation for the evaluation methodology used in this study (see the Methodology chapter for more information).

/ Classification of Proxy Services

A proxy generally means a "substitute". It is an intermediary between a user's device and a target server that allows going online under a different IP address. Proxies have multiple purposes: from improving security to unlocking geo-blocked content to monitoring online activities. There are several different types of proxies to choose from.

A residential proxy is an IP address that is provided by an Internet Service Provider (ISP) to a household. For this reason, residential proxy IPs are generally hard to detect by a website as proxies. Proxy providers usually control large numbers of residential proxies in many locations around the world. Their anonymity, comparatively high connection success rate, and broad geo-location targeting options make residential IPs the favored proxy type among businesses.

On the contrary, **a data center proxy** originates from a server in a data center. Unlike residential proxies, it is not registered with an ISP and only imitates a real internet connection. This makes data center IPs faster and more stable. However, they are easy to identify as proxies if the target website monitors its traffic. So, data center proxies are much more vulnerable to cloaking and connection blocks.

Taking a step further, proxies can be either **dedicated, semi-dedicated or shared**.

In essence, **a dedicated proxy** is used by only one person at a time. This kind of proxy, also known as a private proxy, provides a user with completely private IP authentication and anonymity. In exchange, they are generally the most expensive out of the three.

A semi-dedicated proxy can have up to 2-5 simultaneous users. Or it can be assigned to access only a specific target. Such proxies cost less than dedicated proxies. But they are often slower and sometimes suffer from the "bad neighbor effect".

A shared proxy can be under the control of hundreds or even thousands of different users. This kind of proxy will not offer high quality, speed or connection success. Shared proxies are often available online in free proxy lists; using them is not recommended to avoid malicious advertising or malware risks. Some providers offer paid shared proxy services.

Different proxy providers have expanded the classification with additional proxy types, such as virgin proxies. However, these are the main ones.

/ Providers

The research covers nine proxy service providers. They are widely received as the leading companies in the proxy market. The list also includes some notable up-and-comers like Packetstream.

Luminati

The largest proxy provider today. Founded in 2014 in Israel, Luminati offers all-inclusive proxy services that cover every kind of proxies all around the world. The provider targets business customers and is known to position itself as an ethical proxy company. Luminati's strengths lie in the amount of features of its proxy servers and the infrastructure built around them.

Services: Residential proxies, data center proxies, mobile proxies
Proxy pool: Over 40 million residential IPs
Location coverage: Every country, many cities
Customer service: 24/7, dedicated account manager
Advertised uses: E-commerce, travel aggregation, ad verification, brand protection, SEO monitoring, web data extraction, website testing

oxylabs

A contender for the first place in the proxy market. Oxylabs is a Lithuanian company in business since 2012. Its products include residential, data center proxies, as well as a specialized tool for web scraping. Oxylabs emphasizes enterprise features and support, offers SLAs and insurances. Much like Luminati, it is a premium proxy provider that primarily targets large businesses.

Services: Residential proxies, data center proxies, Real-Time Crawler
Proxy pool: 30M+ residential IPs
Location coverage: Every country, many cities
Customer service: 24/7, dedicated account manager
Advertised uses: Market research, brand protection, travel fare aggregation, ad verification, sales intelligence, SEO monitoring, product page intelligence, email protection

smartproxy

Another major player. Established in 2017, Smartproxy has been on a growing spurt. The provider focuses on residential proxies but also offers shared data center IPs. Its target customers have been small & medium businesses, though Smartproxy has enough features and location coverage to draw larger customers. The company emphasizes self-service, which is reflected in extensive user documentation and ease of use.

Services: Residential proxies, data center proxies
Proxy pool: 10M+ residential IPs
Location coverage: 195 countries, 8 major cities
Customer service: 24/7
Advertised uses: Market research, social networks, retail

GeoSurf

A proxy market veteran. Geosurf was founded in 2009 by Israeli company BiScience. Its main products today are residential proxies and Geosurf VPN. The provider seems to target both enterprise customers with marketing use cases as well as smaller businesses, most notably sneaker resellers. Geosurf's proxy network is relatively small but features rich location targeting options.

Services: Residential proxies
Proxy pool: 2.5M+ residential IPs
Location coverage: Every country, 1700+ cities
Customer service: 24/7 dedicated support
Advertised uses: Instagram, Craigslist, sneakers, sales intelligence, ad verification, SEO, social listening

Shifter

A large provider with questionable ethics. Shifter is a rebrand of a long-standing proxy service called Microleaves. On the internet, Microleaves is known as much for its proxies as for an intrusive adware with the same name. Morals aside, the company offers one the biggest rotating residential proxy networks with global locations and highly-scalable plans. The proxies are feature rich but require whitelisting, and location targeting is reserved for upselling more expensive pricing plans.

Services: Residential proxies, data center proxies
Proxy pool: 31M residential IPs
Location coverage: Every country, many cities
Customer service: 24/7
Advertised uses: Sales intelligence, brand protection, ad verification, self testing, talent sourcing, comparative intelligence, social networks, sneakers

STORM PROXIES

The affordable proxy service. Storm Proxies offers rotating residential and data center IP addresses in Europe and the United States. It is one of the most accessible providers due to a low entry threshold and attractive pricing. However, limited location coverage and a small proxy network make Storm Proxies less suitable for demanding or location-sensitive projects. The provider seems to have the most presence in the US.

Services: Residential proxies, data center proxies
Proxy pool: 40,000 residential IPs
Location coverage: US, EU
Customer service: 24/7
Advertised uses: Traffic bots, ad verification, market research, SEO, web scraping, brand protection, pricing intelligence, sneakers

A flexible intermediary. In business since 2016, RSocks is not a proxy service in the strict sense. Instead, it only connects the buyer with undisclosed proxy providers. This lets RSocks offer a wide variety of features and flexible plans for individual use cases. However, it also fragments the proxy network and makes it harder to ensure proxy quality. RSocks is among the few providers that allow gray-hat proxy uses, such as sending mass emails.

Services: Residential proxies, data center proxies, mobile proxies
Proxy pool: 1M+ residential IPs
Location coverage: Plan-based
Customer service: 24/7
Advertised uses: Any task. Special location plans, proxy packs for Youtube, Twitch, and mailing

The third Israeli proxy provider. In business since 2017, NetNut differentiates itself with ISP-issued residential proxies and an in-house infrastructure. In theory, this should combine the speed and stability of data center proxies with the anonymity of residential IPs. However, it also means fewer locations and introduces risks associated with server IP addresses.

Services: Residential proxies
Proxy pool: Approx. 0.5M static residential IPs
Location coverage: Around 50 countries
Customer service: 24/7
Advertised uses: Ad verification, retail price comparison

A promising newcomer. Founded in 2018, PacketStream is a US-registered proxy provider. It offers residential proxies with extensive country-level location coverage. Unlike many other proxy services, PacketStream is very transparent about how it gets residential proxy IPs: The provider offers people to sell their traffic directly on the website. This makes the proxies very inexpensive; but the service is still basic compared to more established competitors.

Services: Residential proxies
Proxy pool: Around 500,000 residential IPs
Location coverage: All major countries
Customer service: Available
Advertised uses: Content verification, price comparison, brand protection, social media marketing

/ Methodology

This research was conducted in three stages to provide the most precise and objective evaluation of the largest proxy networks in the world.

1.
A qualitative study of experts and companies in 6 distinct industries was conducted by contacting them via email, Twitter, Discord and other communications channels. The respondents were asked to confirm proxy usage in their industry and to provide a qualitative outline of the essential criteria and target servers for testing a proxy network.

2.
Automated technical tests via proprietary Proxyway scripts and other publicly available testing solutions were conducted in Jan-Feb 2020. These tests measured connection speeds, response times, network stability and reliability, proxy security and anonymity, the quality of the pool of IP addresses. 4 major groups of target servers were chosen for some of the tests to evaluate the proxies for specific use cases.

3.
Extensive technical test data were evaluated and formed into a Proxyway Standard Proxy Score (PS2) for each industry. These scores comprise the top qualities for each proxy use case. Some might combine several metrics, such as Scalability, which encompasses Size and Reliability. Proxy networks with the largest PS2 for a certain industry are considered the best proxies for that use case.

The data for this report were gathered during November 2019 – February 2020.

/ Testing Methodology

Experts in every category suggested primary testing targets (i.e. servers to connect to through the proxy networks). Connections to these servers were treated as more important for the relevant industry.

It was decided to include only residential proxies in the evaluation. Residential IPs are widely considered to be superior to data center proxies. The exclusion also kept the research scope reasonable.

Each provider underwent three proprietary Proxyway tests to measure the main proxy performance metrics:

1.
The first test targeted four major website groups chosen based on our interviews with the industry experts. It evaluated how successful the proxies were in accessing those websites, and how fast they could establish a connection.

2.
The second test made the proxies continuously connect to a Cloudflare server. Aside from measuring the success rate and speed metrics, it also tracked how many of the IPs in a provider's pool were unique.

3.
The third test put the proxy servers under 250 concurrent connections to evaluate the stability of the provider's infrastructure.

Then, the providers went through four additional proxy quality tests using publicly-available online tools:

1.
IP Intelligence – a service that uses advanced mathematical and modern computing techniques to determine how likely an IP address is a proxy/VPN/bad IP.

2.
WhatLeaks – a service that uses browser fingerprinting to look for IP leaks in a proxy, VPN or other means to hide the user's real IP address. It also checks if the proxy appears in any blacklists.

3.
Whoer – another tool that uses browser fingerprinting to check whether the IP belongs to a proxy server and if there are any DNS mismatches.

4.
Leaky – a test that checks for leaks in browser headers.

Finally, relevant data on each provider's features (such as proxy network size, pricing structure and help documentation) were collected by hand from the provider's website or by contacting their customer support.

/ Evaluation Methodology

All evaluations in this report are based on expert opinions. At least 28 respondents in each of the six categories provided answers about proxy usage in their industry. Seeing as this report is not focused on the survey we conducted, we will only provide the relevant evaluation criteria, which stem from the results of the survey.

Proxyway Standard Proxy Score (PS2)

Anonymity – shows how well a proxy provider hides the original user, when testing with proprietary and third-party tools. We track IP leakage, DNS leaks, OS leaks, IP blacklists, fingerprints and other identifiable information. Every instance of a leak or blacklist deduces 1 point from the maximum Anonymity score of 10.

Ease of Use – a subjective measure that encompasses the purchase process, setup, documentation, support and communication with the proxy providers.

Locations – the ability to select and use IP addresses from a particular country. It directly relates to the number of locations a provider allows its clients to use and their availability (e.g. additional costs). We hold that a global network will allow customers to use proxies in 200 countries without additional restrictions or payments.

Locations = (restrictions + number of countries) / 30
restrictions: 100 for unlimited access; 50 for paid access to all countries; and 0 for separate pricing plans for each country.

Price – measures the dollar value of access per proxy, subscription or any other pricing plan.

*Price = (1000 - cheapest option) * (pricing structure) / 100*
pricing structure: full access = 1; a limited pool = 0.3, pricing by ip = 0.1

Diversity – the rate (%) of unique IP addresses a provider supplies, checked with the help of a proprietary Proxyway script.

Diversity = (unique IP %) / 10

Reliability – the rate at which a given proxy network is able to sustain a stable Success Rate when tested under increasingly severe stress through up to 300-500 concurrent connections.

Reliability = (success rate + 100 - percent drop under. stress) / 20

Scalability – a measure that combines Size and Reliability to define how likely the network is to accommodate rapidly growing clients. Because some providers greatly differ in size, this is the only score that can exceed 10.

*Scalability = (reliability * size) / 5*

Size – the highest number of proxies offered by the provider. The division by 4 mln is based on the provider with the largest proxy network. Luminati boasts 40 million IP addresses (and thus earns the maximum score of 10).

Size = pool size / 4 000 000

Speed – the time it takes the proxy network to receive a response to a connection request.

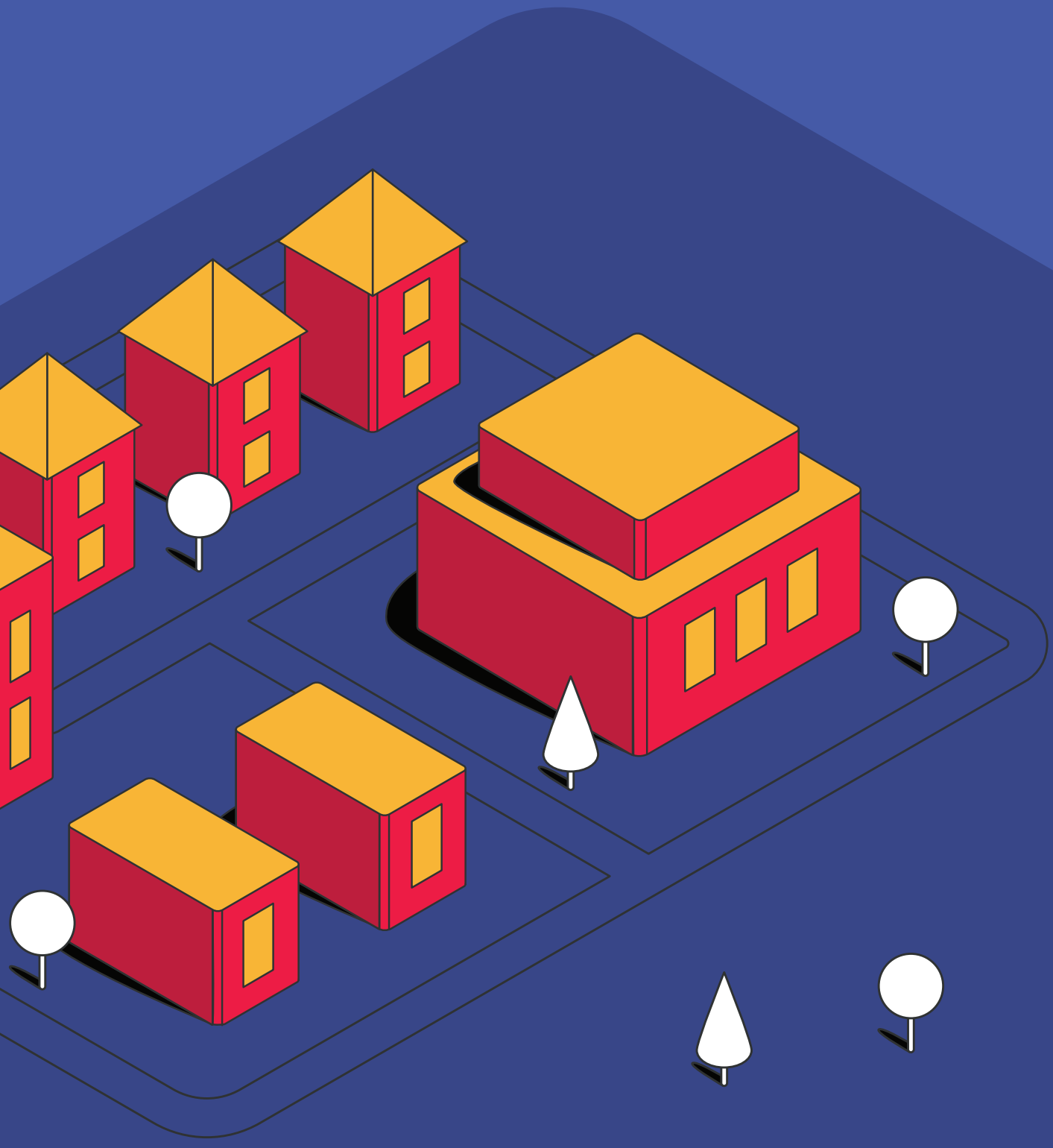
Speed = 10 - avg response time

Success Rate – the rate (%) at which a proxy network's nodes can successfully return a response to multiple connection requests. Divided by 10 for a maximum score of 10.

Success rate = (% successful connections to target servers) / 10

/ 10

/ Best Proxies by industry



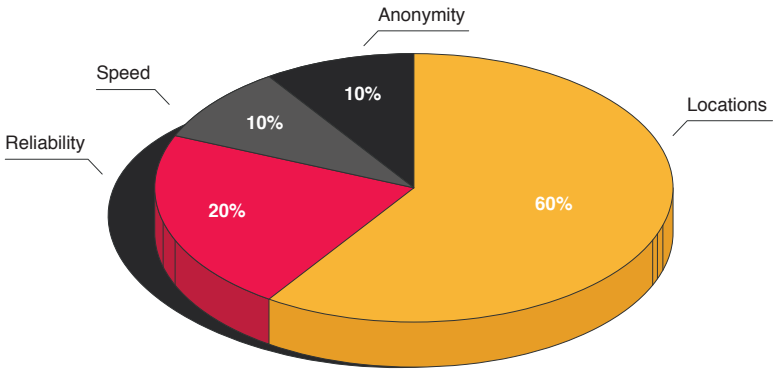
/ Best Proxies for SEO

The search engine optimization and search engine marketing industry uses proxies to access precise data for localized search queries. Most SEO tools also use proxies to increase their efficiency and speed by connecting to target servers more often.

Since SEO is a very popular and data-hungry industry, SEO proxies must also be reliable and fast to let users and tools from around the globe access data in local registries and over a dozen search engines.

The 32 experts we talked to ranked these proxy features as the most important for day-to-day SEO:

- Locations 60%
- Reliability 20%
- Speed 10%
- Anonymity 10%



The Proxyway Standard Proxy Score (PS2) for SEO proxies is aggregated by weighing the Locations score of a provider by 0.6, the Reliability by 0.2, Speed and Anonymity by 0.1. Each of these scores lets us compare the features of each provider in a clear and standardized fashion. The percentage weights attributed to these features are determined by the experts' rankings.

By weighing the features by their importance for the SEO industry, we could identify the top proxy providers for SEO proxies. Their suitability for SEO is defined by an easy-to-compare Proxyway Standard Proxy Score:

#1 Oxylabs	9.53
#2 Smartproxy	9.53
#3 Packetstream	9.29
#4 Shifter	8.27
#5 Luminati	8.19

Anonymity	Speed	Reliability	Locations
9	7.7	9.8	9.83

These proxy providers are the best for search engine optimization, as determined by our data based on expert feedback. To see more information about precise proxy measurement tests, see Appendix A.

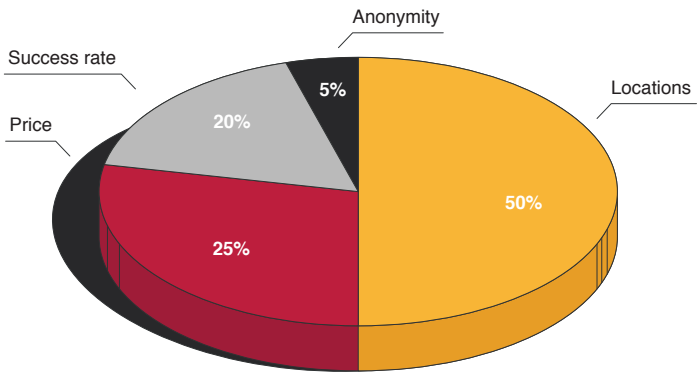
/ Best Proxies for Application Development and Localization

Application developers, testers and localization professionals use proxies to simulate traffic and global connection requests to their servers. Localized web pages and apps need to respond with a proper localized version of their interface when a user connects from another country. Global proxy networks allow them to connect through servers in any country, making localization testing easier. Also, scalable proxy networks allow testers to send thousands of connection requests to their servers and see how they manage the load.

Some experts we talked to resort to using VPN solutions for localization testing. They admitted that residential proxies are a more precise localization testing tool than VPNs that use data center IP addresses. Connection Success Rate is an important quality metric for app testers, as well as Anonymity. An anonymous and secure connection is important to test services with advanced device fingerprinting technologies, as they might get thrown off by a proxy that leaks additional information. Lastly, the cost of proxies is also a factor for the app development and localization testing cycle.

The 28 experts we talked to ranked these proxy features as the most important for application development and testing:

- Locations 50%
- Price 25%
- Success rate 20%
- Anonymity 5%



The Proxyway Standard Proxy Score (PS2) for app development proxies is aggregated by weighing the Locations score of a provider by 0.5, the Success Rate score by 0.2, Price by 0.25 and Anonymity by 0.05. Each of these scores lets us compare the features of each provider in a clear and standardized fashion. The percentage weights attributed to these features are determined by the experts' rankings.

By weighing the features by their importance for the app development and localization industry, we could identify the top proxy providers for app development proxies. Their suitability for app testing is defined by an easy-to-compare Proxyway Standard Proxy Score:

#1 Smartproxy	9.57
#2 Packetstream	9.51
#3 Oxylabs	9.00
#4 Shifter	8.41
#5 Luminati	7.36

Success Rate	Price	Locations	Anonymity
9.46	9.25	9.83	9

These proxy providers are the best for app and localization testing, as determined by our data based on expert feedback. To see more information about precise proxy measurement tests, see Appendix A.

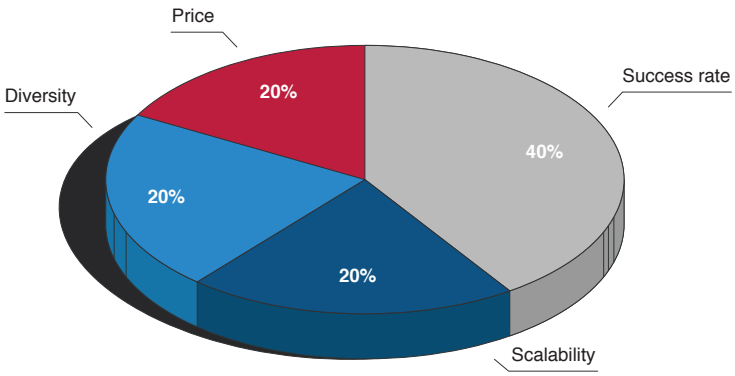
/ Best Proxies for Data Scraping

Data scraping is a broad field. While internal data scraping technologies might not need proxies, there are countless areas and industries where data scraping (or web scraping) software is essential for daily operations. Market analytics, SEO and data aggregation fields are among the most prominent businesses dependent on web scraping. Their data sources are often limited and their approaches to data scraping are quite specific. For example, data aggregators depend on extremely fast access to data, which is not that important when scraping data for market analysis. As such, those scraping use cases have separate proxy criteria that are more suitable for those cases.

In this part of the report, proxies are evaluated for their general usability for data scraping operations. The 36 experts from this field target numerous public data sources in any given month. They need versatile proxy networks that have the highest possible Success Rate for a wide variety of target servers. Data scraping businesses also rely on the Scalability and Diversity of proxy networks to scale their operations reliably. Many scraping companies noted that pricing options are always a factor for choosing a proxy provider.

The experts we talked to ranked these proxy features as the most important for data scraping:

- Success rate 40%
- Price 20%
- Diversity 20%
- Scalability 20%



The Proxyway Standard Proxy Score (PS2) for data scraping proxies is aggregated by weighing the Success Rate score of a provider by 0.4, the Scalability, Diversity and Price scores by 0.2. Each of these scores lets us compare the features of each provider in a clear and standardized fashion. The percentage weights attributed to these features are determined by the experts' rankings.

By weighing the features by their importance for the data scraping industry, we could identify the top proxy providers in the world. Their suitability for web scraping is defined by an easy-to-compare Proxyway Standard Proxy Score:

#1 Oxylabs	9.95

Success Rate	Scalability	Diversity	Price
9.42	14.69	9.2	7

#2 Luminati	8.93
#3 Smartproxy	8.46
#4 NetNut	6.4
#5 Packetstream	6.25

These proxy providers are the best for data scraping, as determined by our data based on expert feedback. To see more information about precise proxy measurement tests, see Appendix A.

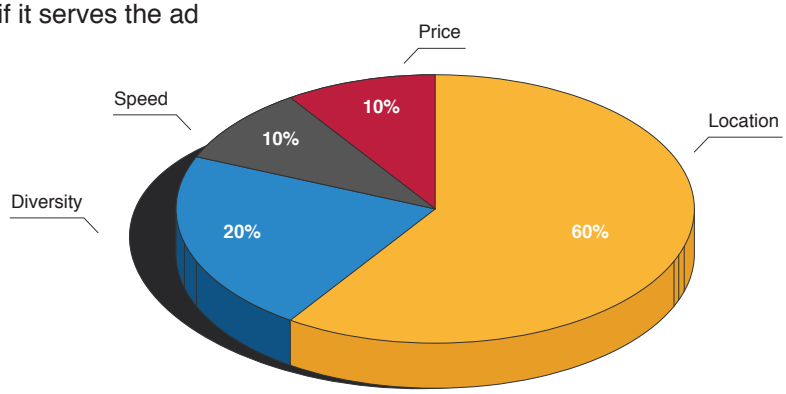
/ Best Proxies for Ad Verification

Ad verification is one of the most vital digital advertising technologies. It helps companies protect their brands and reputations, as well as prevent fraudulent activity. There are several key areas where proxies come into the ad verification picture.

Ad publishers can test and evaluate the redirection paths of any advertisement with a proxy server. As localized advertisements gain more traction, publishers also test how their network serves advertisements to users from around the world. This is why location targeting is extremely important for ad verification proxies.
Proxies are also used to test placement websites. For instance, an ad verification script might access a site and check if it serves the ad in a proper format, does not exhibit fraudulent activity or post objectionable, adult or illegal content. Since these checks are targeted against ad fraud, bad actors have good incentives to block the IP addresses of known ad verification companies and testers. High quality residential proxy networks let the good guys avoid such blocks and protect a good chunk of the online advertising industry.

In this report, we examine the proxy networks that are used for ad verification every day. Based on the opinions of 33 digital advertising companies and professionals, we determined the most important features of a perfect ad verification proxy network:

- Location 60%
- Diversity 20%
- Speed 10%
- Price 10%



The Proxyway Standard Proxy Score (PS2) for ad verification proxies is aggregated by weighing the Locations score of a provider by 0.6, the Diversity score by 0.2, and the Speed and Price scores by 0.1. Each of these scores lets us compare the features of each provider in a clear and standardized fashion. The percentage weights attributed to these features are determined by the experts' rankings.

By weighing the features by their importance for the advertising industry, we could identify the top proxy providers in the world. Their suitability for ad verification is defined by an easy-to-compare Proxyway Standard Proxy Score:

#1 Smartproxy	8.51
#2 Oxylabs	8.29
#3 Packetstream	7.81
#4 Shifter	7.06
#5 Luminati	6.78

Diversity	Price	Location	Speed
9.2	9.25	9.83	7.65

These proxy providers are the best for data scraping, as determined by our data based on expert feedback. To see more information about precise proxy measurement tests, see Appendix A.

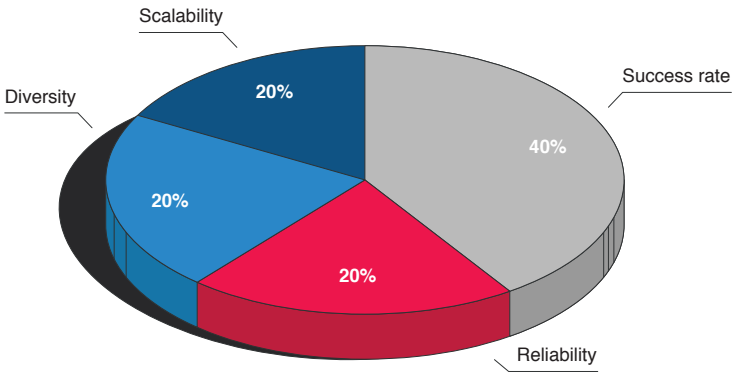
/ Best Proxies for Data Aggregation

Data aggregators make the world go around. Travel fare aggregators gather pricing information almost instantly, price comparison services let millions of users get the best deal on an item, while stock market aggregators compile unfathomable amounts of data every day the market is open.

At first glance, data aggregation uses data scraping techniques for data acquisition and gathering; but there are important differences from general data scraping projects in the type of projects data aggregators run. On the one hand, data aggregators scrape the same targets over and over again, while most data scraping companies target new websites every week. On the other hand, some of them have to handle millions of customer requests and provide data extremely quickly, as opposed to general data scrapers or the slowest data gatherers – market researchers. This is why data aggregation proxies must be very reliable, i.e. handle more stress on the network. And, since data aggregators usually act as middle-men, affiliates or data brokers, they are not as sensitive to the proxy Price.

For our evaluation, 31 data aggregation professionals and companies ranked the most important proxy features:

- Success rate 40%
- Scalability 20%
- Diversity 20%
- Reliability 20%



The Proxyway Standard Proxy Score (PS2) for data aggregation proxies is calculated by weighing the Success Rate score of a provider by 0.4, the Diversity, Reliability and Scalability scores by 0.2. Each of these scores lets us compare the features of each provider in a clear and standardized fashion. The percentage weights attributed to these features are determined by the experts' rankings.

By weighing the features by their importance for the data aggregation industry, we could identify the top proxy providers in the world. Their suitability for acquiring data for aggregation is defined by an easy-to-compare Proxyway Standard Proxy Score:

#1 Oxylabs 10.5

Success Rate	Scalability	Diversity	Price
9.42	14.69	9.2	9.8

#2 Luminati	9.63
#3 Smartproxy	8.57
#4 NetNut	6.93
#5 Packetstream	6.2

These proxy providers are the best for data aggregation, as determined by our data based on expert feedback. To see more information about precise proxy measurement tests, see Appendix A.

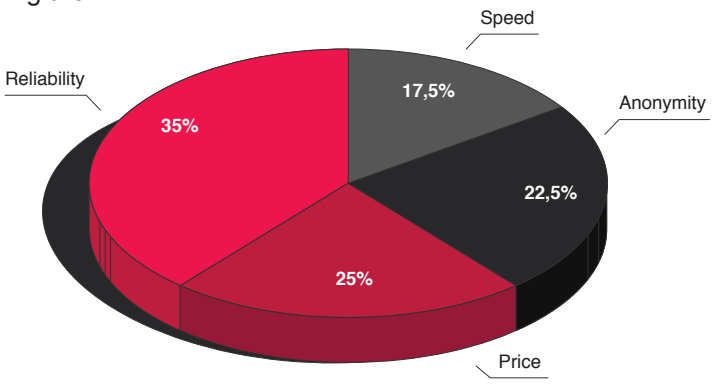
/ Best Proxies for Market Research

Data is vital for researching any market. Residential proxy networks allow researchers to gather public data efficiently. With proxies, they can avoid geographic access restrictions. Most of the time the method for data gathering is scraping, but some researchers also use proxies with APIs to speed up data acquisition or balance the load on their servers.

In contrast to all other scraping activities, market research does not rely so much on speed. The largest value is created during the analysis, after the data is scraped, so market researchers are more lenient on the Scalability of their proxy networks. On the other hand, market research professionals note that they are a lot more sensitive to the Price and Reliability of their proxies than others in our survey.

The 31 experts and companies we talked to rated these proxy features as the most important to them:

- Reliability 35%
- Price 25%
- Anonymity 22.5%
- Speed 17.5%



The Proxyway Standard Proxy Score (PS2) for market research proxies is calculated by weighing the Reliability score of a provider by 0.35, the Price by 0.25, Anonymity by 0.225 and Speed scores by 0.175. Each of these scores lets us compare the features of each provider in a clear and standardized fashion. The percentage weights attributed to these features are determined by the experts' rankings.

By weighing the features by their importance for the marketing industry, we could identify the top proxy providers in the world. Their suitability for acquiring data for market research is defined by an easy-to-compare Proxyway Standard Proxy Score:

#1 Smartproxy	9.12
#2 Packetstream	8.65
#3 Oxylabs	8.55
#4 NetNut	7.48
#5 Luminati	7.45

Reliability	Speed	Anonymity	Price
9.83	7.65	9	9.25

These proxy providers are the best for marketing, as determined by our data based on expert feedback. To see more information about precise proxy measurement tests, see Appendix A.

/ Conclusions

Creating an infallible proxy measurement standard like the Proxyway Standard Proxy Score is not an ordinary task. There is little to no information about how any of the dozen or so industries use proxies. Short of measuring technical features such as proxy Speed or connection Success Rate, we wanted to find out what exactly makes a proxy network valuable for, say, data scraping.

We managed to reach out to over 191 industry experts in 6 niche markets. Their advice, experience and industry knowledge helped us create the PS2. As we predicted, almost every use case had different proxy preferences. For over a month we labored on converting the raw technical test data into single-digit scores that would give a simple and objective way to compare proxy providers.

The research revealed several trends in the proxy market. As we added new providers, such as Packetstream, we found that even some veterans, e.g. Luminati, might underperform for some use cases. Oxylabs strengthened its position as a leading proxy provider for two years in a row, but the upstart Smartproxy managed to beat them by a hair's length in some use cases.

Raw test data show that at least 5 providers had some proxies blacklisted. Some had leaked DNS or OS information which might be used for fingerprinting. The uniqueness of the proxy pools varied from 1% to 96%. While alarming, these differences are not necessarily important to every proxy user, as our expert surveys have shown.

Another important finding was less technical than it was social. We discovered first-hand how reluctant companies are to disclose how they use proxies, or even admit using them in the first place. Even then, the vast majority of experts we talked to wished to remain anonymous, due to the negative public image of proxy networks.

For us, this marks just the first step in improving our annual proxy market research activities. We are already planning a new round of tests and asking experts for more in-depth information about their proxy use and preferences. We also hope that shedding light on the proxy market will give impetus for changing the way proxies are seen in today's digital economy.

About Proxyway

Proxyway is a community blog dedicated to the research and testing of proxy providers. We're committed to delivering comprehensive reviews, detailed guides and other high-quality content explaining the "hows" and "whys" of current proxy technology. Our mission is to inform and educate our readers – both regular people and tech geeks.

Proxyway was started in 2018, when two tech-enthusiasts, Adam Dubois and Chris Becker, met on Stack Overflow. Soon after, an idea was born to create a review-focused website to help others find their way in the murky waters of the proxy world.

/ Credits

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/ Appendices

Appendix 1. Proxy performance tests

	Target websites	Cloudflare test	Stress test	Total	Unique IPs
Smartproxy					
Success Rate	91.56%	95.71%	96.49%	94.59%	92.00%
Avg. speed (s)	2.92	1.84	2.30	2.35	
Oxylabs					
Success Rate	91.16%	95.41%	95.91%	94.16%	92.00%
Avg. speed (s)	2.82	1.761	2.31	2.30	
Luminati					
Success Rate	66.67%	98.71%	70.28%	78.55%	69.00%
Avg. speed (s)	1.74	3.08	4.63	3.15	
Geosurf					
Success Rate	93.96%	94.18%	72.03%	86.72%	1.00%
Avg. speed (s)	2.95	2.37	5.38	3.57	
Storm Proxies					
Success Rate	69.68%	87.63%	40.32%	65.88%	3.00%
Avg. speed (s)	3.59	2.13	3.56	3.09	
RSocks					
Success Rate	26.60%	31.64%	31.51%	29.92%	9.00%
Avg. speed (s)	4.06	1.93	3.18	3.06	
Netnut					
Success Rate	93.87%	40.78%	92.87%	75.84%	96.00%
Avg. speed (s)	2.79	1.91	4.18	2.96	
Shifter (Microleaves)					
Success Rate	70.98%	92.05%	27.02%	63.35%	6.00%
Avg. speed (s)	3.75	1.81	12.48	6.01	
Packetstream					
Success Rate	96.15%	98.91%	85.09%	93.38%	12.00%
Avg. speed (s)	1.39	1.59	1.94	1.64	

Appendix 2. Proxy quality tests

	IPI	whatleaks		whoer		leaky
	Score	Passive OS	Blacklists	DNS	Proxy	Status
Smartproxy	0	Linux	CLEAN		No	NONE
Oxylabs	0.22	Linux	CLEAN		No	NONE
Luminati	0.15	N/A	1		No	NONE
Geosurf	0	Windows	1		No	NONE
Storm Proxies	1	Windows	2	N/A	No	NONE
RSocks	0.99	Linux	3		No	NONE
Netnut	0.432	N/A	CLEAN		No	NONE
Shifter (Microleaves)	0.34	Windows	1	N/A	No	NONE
Packetstream	0.64	Windows	CLEAN		No	NONE

Appendix 3. Location coverage

	Location targeting			IP Rotation
	Worldwide	Country	City	
Smartproxy	Yes	Yes	Yes	Instant or 10 min.
Oxylabs	Yes	Yes	Yes	Instant or 10, 30 min.
Luminati	Yes	Yes	Yes	Instant or As long as possible
Geosurf	No	Yes	No	Instant or 1, 3 min.
Storm Proxies	No	US & EU only	No	Instant or 3, 15 min.
RSocks	Yes	Yes	No	Instant or 5 min.
Netnut	Yes	Yes	No	Instant or As long as possible
Shifter (Microleaves)	Yes	Yes	No	Instant or As long as possible
Packetstream	Yes	Yes	No	Instant or As long as possible

Appendix 4. Pricing structure

	Residential Pricing		
	Payment type	Bandwidth	Auto-topup?
Smartproxy	Monthly	$ per GB	No
Oxylabs	Monthly	$ per GB	No
Luminati	Topup	$ per GB	Yes
Geosurf	Topup	$ per GB	No
Storm Proxies	Monthly	Unlimited	No
RSocks	Hr, Day, Week, Month	Unlimited	No
Netnut	Monthly	$ per GB	No
Shifter (Microleaves)	Monthly	Unlimited	No
Packetstream	Topup	$ per GB	Yes

Appendix 5. Ease of use

	Public API	Help Docs	Tools	Setup difficulty/ Ease of use
Smartproxy	Yes	Extensive	Chrome Ext.	Easy
Oxylabs	Yes	Extensive	Real-time crawler	Easy
Luminati	Yes	Extensive	Proxy manager, Unblocker, Chrome Ext., Data Collection Automation	Moderate
Geosurf	Yes	Extensive	Chrome & FF ext.	Easy
Storm Proxies	No	Basic	None	Moderate
RSocks	Yes	Basic	Proxy Checker, IP Changer	Moderate
Netnut	No	Basic	None	Easy
Shifter (Microleaves)	Yes	Basic	None	Moderate
Packetstream	No	Basic	None	Easy

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