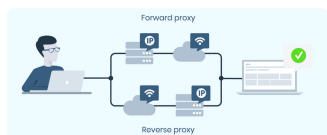


# How users interact with websites: forward vs. reverse proxies

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The automation and anonymity evangelist at Smartproxy. He believes in data freedom and everyone's right to become a self-starter. James is here to share knowledge and help you succeed with residential proxies.

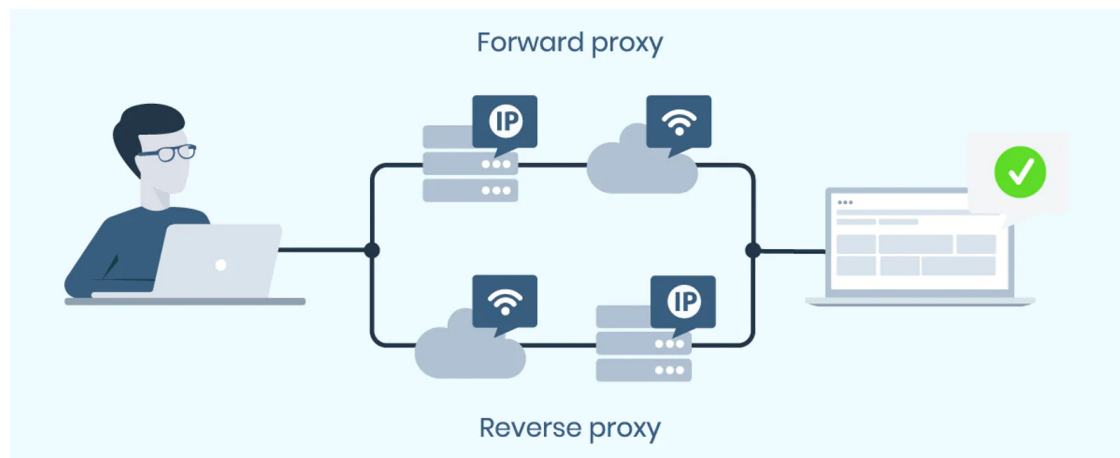
**Topics:** [Hide IP](#), [Unblock](#)

[Smartproxy](#) > [Blog](#) > The Difference Between a Reverse Proxy and a Forward Proxy



[Proxies](#) widen user experience by mediating different online connections, traffic, and client requests. No wonder there is quite a bunch of [proxy types](#) available. Some indicate what devices act as proxy servers, others define how proxy

There are also proxy types that determine the relationship between the client and the proxy server. This position is formally known as the structural position of a proxy. And this position is what makes a proxy either a reverse or forward proxy.



We often receive questions about the differences between forward and reverse proxies. These two are so different that it's not easy to compare them. Yup, it's a tad bit confusing if you aren't an IT pro, but we'll do our best to help you understand how one contrasts with the other.

#### Our menu today consists of:

- [What is a forward proxy?](#)
- [What is a reverse proxy?](#)
- [Forward vs reverse proxies](#)
- [Why people use forward proxies](#)
- [Why people use reverse proxies](#)
- [What is the difference between a load balancer and reverse proxy?](#)

## What is a forward proxy?

A forward proxy is what most people simply call 'a proxy.' You send a connection request to it, and the forward proxy retrieves data from the internet. It usually lets clients access an otherwise firewall-restricted website.

This site uses cookies and [Find out more](#)

Okay, thanks

A forward proxy can help you bypass a network block. For example, if your network blocks [Instagram](#), you can forego the block with a proxy. Connecting to a forward proxy instead of Instagram's services directly with your original IP, will

allow you to get the information without alerting the firewall.

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***//A forward proxy lets you send a connection request and retrieves the original data from a website.***

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Forward proxies also provide anonymity. An [anonymous forward proxy](#) will hide your original IP address from any connection target.



## What is a reverse proxy?

Reverse proxies control access to a server on a private network. They can encrypt and decrypt data, perform authentication tasks, cache information, and act as load balancers.

Although many sites claim that reverse proxies perform load balancing, they aren't just load balancers. In essence, a reverse proxy is a gateway to a web server or a group of servers. Reverse proxies provide anonymity for backend servers, not clients, by masking the actual location of the origin servers clients wish to access.

Have in mind that reverse proxies are useful even if you have only one server. They can serve as the front-facing part of your website, adding security and flexibility to the site. As clients can only access your network through a reverse proxy, it keeps out malicious attacks.

Reverse proxies are a must-have for sites with millions of visitors because they use many servers. All of the traffic to a website must pass through a reverse proxy. Only then can people access the servers, without overloading them. Reverse proxies also bring two or more servers into the same URL space.

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**// A reverse proxy can perform authentication tasks, cache, or decrypt data. It provides anonymity for backend servers, not clients.**

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On top of all that, reverse proxies also let owners change platform or server configurations without impacting the users. By using reverse proxy solutions, you can boost the speed of a site by storing a cached site at the frontend of the service. This is useful whenever backend servers are performing poorly.



## Forward vs reverse proxies

### Differences

Remember how we said at the beginning that you can't really compare the two? Well, though the terms suggest functioning as intermediaries and being on the same dimension, they're on the opposite sides of the client-server connection.

The forward proxy is a web proxy that the client puts forward between itself and the target server. The reverse proxy is at the other end – it's a web proxy that the server puts forward between itself and the client. In other words, a forward proxy is used by a client, whereas the reverse one – by an internet server. A forward

proxy guarantees that websites don't communicate directly with a user. A reverse proxy ensures that users don't communicate directly with a backend server.

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***//Forward proxies are used by clients, not servers. Reverse proxies, on the other hand, are primarily designed to protect servers, not clients.***

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## Similarities

In essence, forward and reverse proxy services are meant for different tasks but they both:

1. Handle client requests and mediate web traffic.
2. Authorize or block access to a service.
3. Act as a single access point for either devices or servers.

## Forward proxies: common use cases

There are quite a good few reasons why single users or businesses use forward proxy servers:

### #1 A remedy for geo-restrictions

First and foremost, a forward proxy will let you enjoy no geo-blocks and avoid country restrictions. Forget about the great firewall of China or other blocked resources anywhere in the world!

When using a forward proxy, users can access the content intended for other countries. For example, imagine you need to see if your ads are visible in Canada. Just use a [Canada proxy](#) and access content in Canada. Simple, right?

### #2 Anonymity

A forward proxy [hides the identity](#) and location of the original client by changing their IP address with that of the proxy. It's actually the proxy that connects to the end server.

## #3 Web scraping

The most common use of proxies is [web scraping](#). To stay competitive, a company needs to collect information from various resources to improve its social media campaigns, marketing, pricing, and other business strategies.

## Reverse proxies: common use cases

Reverse proxy capabilities are enormous. There's a bunch of reasons why (and how) businesses use reverse proxy servers, but let us give you three key ones:

### #1 Load balancing

These days, web traffic is heavy! Just imagine all those millions of visitor requests hitting websites every second. If you have only one server, your internet site might not handle all incoming network traffic. This is why it's vital to distribute traffic among a group of backend servers that all handle client requests for the same website.

A reverse proxy can provide excellent load balancing solutions, equally distributing incoming traffic between different servers. This way, servers stay protected from being overwhelmed by multiple requests at the same time. If there's a point of failure at one server, the other servers can handle the traffic as well.

### #2 Security

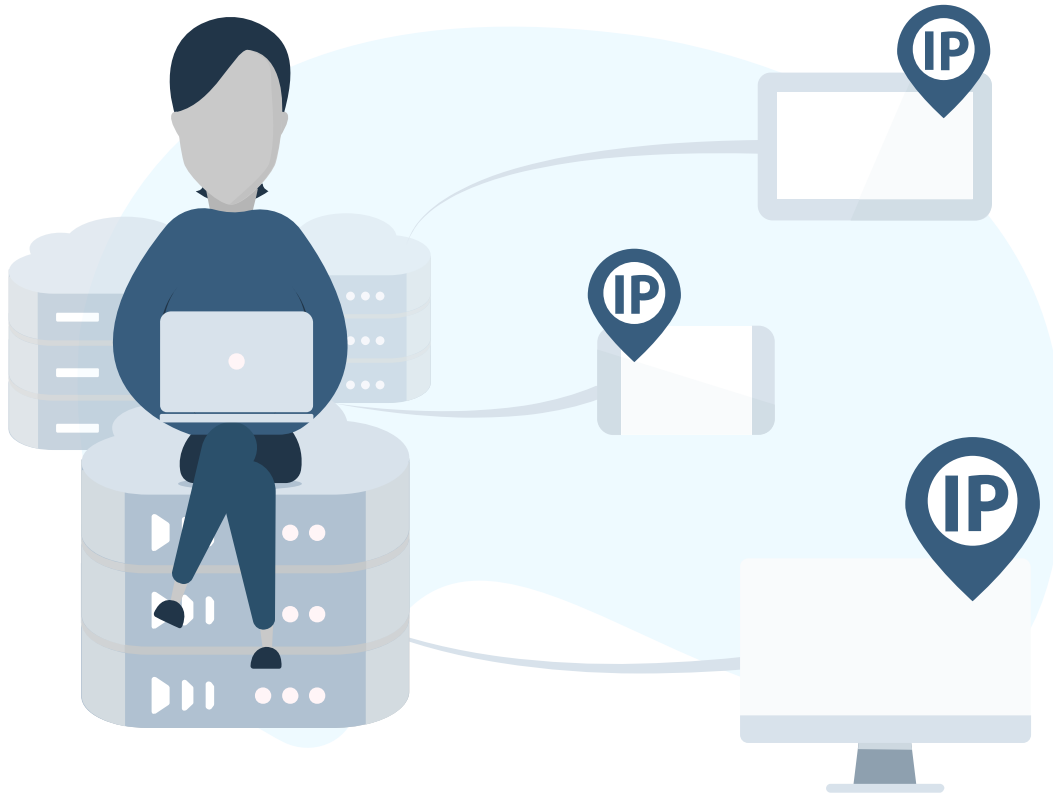
The reverse proxy server blocks requests from being sent to a backend server. A website, which uses a reverse proxy server, will never reveal the IP addresses of the origin server, which makes it difficult to execute attacks.

Besides, if you're a server owner, you can use reverse proxies to hide the rest of your servers behind a firewall that is only accessible with the help of the reverse proxy. This way, your servers stay even more secure and anonymous.

### #3 Speed

A reverse proxy server can compact incoming and outgoing data and cache frequently requested content. If you do both, this will boost the flow of traffic between the client and the server.

On top of that, reverse proxy servers can also perform some additional tasks, such as SSL encryption or HTTP access authentication, which reduces the load on your web servers. What's the result of that? Your website performance improves!



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**// People use reverse proxies to improve the load balancing, security, and speed of a website. All this enhances the performance of your internet site.**

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## What is the difference between a load balancer and reverse proxy?

Load balancers are a must-have solution for websites that use multiple servers to handle a massive volume of requests. They distribute traffic among these

to handle a massive volume of requests. They distribute traffic among those servers and also help them eliminate a single point of failure. How does this work? A load balancer can detect when a particular server (or group of servers) goes down and distribute the traffic among the remaining well-functioning servers.

A reverse proxy, on the contrary, is a valuable solution even when you have only one web server. It can act as a load balancer, but it can also perform different functions, such as decryption and encryption of communication, cache, authentication, etc. This way you can enhance the performance metrics and security of a site.

## Frequently asked questions

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**Does Smartproxy support reverse and forward proxies?**



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**Can I use both residential and datacenter proxies as forward or reverse proxies?**



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**Do Smartproxy's proxies work on all software?**



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**Is Nginx a reverse proxy solution?**



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**What is the difference between Nginx and Nginx Plus?**





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