



Proxy Server - A Catching Technique

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Abstract: A proxy server is a computer system used for connecting client and server. It is used to create a firewall. It is a gateway between users and the internet. A proxy server is always an intermediary” between end-users and internet that are the web pages user visits online. The word proxy refers as "to act like same on behalf of some other," means it acts on behalf of the user.

Keywords: VPN, Relocation.

INTRODUCTION

When a computer connected to the internet, it always uses an IP address. A proxy server is a computer on the internet that has its own IP address. Some people use proxies for personal purposes, such as hiding their location or identity while searching some personal data like watching some sites. Companies are using proxies for improving security like some people from outside the company snoop employees' internet activity, to prevent crashes on Balance internet traffic, Control the websites employees access, Saves bandwidth by compressing files. It acts as a intermediary between for a computer (user) and the internet because a proxy server has its own IP address, Our computer knows this address, and when you send a request on the internet, it is forwarded to the proxy, which then gets the response from the web server and forwards the data from the page to your computer's browser, like Chrome, Safari, Firefox, or Microsoft Edge. Whenever user is sending a request for some data then that request is going to the main server in a routine way main server consist of a huge database so when it accepts any request from the user it takes a lot of time to search in that database. A proxy server is having a database of files that are frequently accessed by the user. so database of proxy server is not a huge so that whenever user is sending a request for some files that request is routed to proxy not to main server which reduces time and also frees the main server.

LITERATURE SURVEY

The proxy strategy has been widely used as a means to reduce the delay in retrieving Web pages over wireless mobile data networks. However, this strategy has a serious drawback of being a potential point of failure or a bottleneck of the service.[1]

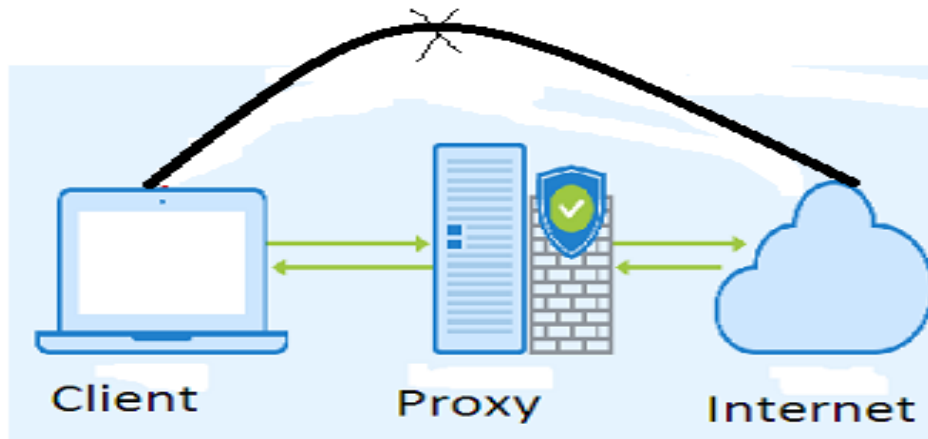
It is difficult to find attacker's real IP address because attackers use the IP spoofing method to hide their IP address while they use proxy servers. So it is required to study method of defending users against IP spoofing attacks through proxy servers.[2]

Many organizations have been facing trouble while providing service to their users with adequate access and response time. Increase bandwidth on more connections to the Web can relieve the access problem, but because of this it does not decrease the access time. A proxy server is a Web server that caches Internet resources for re-use by a set of client machines. [3]

while browsing images remotely we must have very much attention mostly in applications like geographical information systems(GIS). Interactive transmission of compressed images has been identified as the most competitive approach. so while transferring images using proxy server is easy but we should give attention on security of data.[4]

DESCRIPTION

A VPN is quite similar to a proxy. Your computer is configured to connect to another server, and it may be that your route web traffic through that server. But where a proxy server can only redirect web requests, a VPN connection is capable of routing and anonymising all of your network traffic.



Proxy servers also act as a firewall and web filter, provide shared network connections, it cache data to speed up common requests. A proxy server reduces a breach. Proxy servers is an extra layer of security between your servers and traffic on internet . proxy servers can as a buffer as it takes request from outside world or diffrent users Proxy Servers are referred to those servers that act as an intermediary to the request made by clients to a particular server for some services or request for some resources. There are diffrent types of proxy servers and their uses depends on the request by client/user to the servers.If youare a part of any organization, you will liketo use a proxy server as it is a like a double filtration and security .

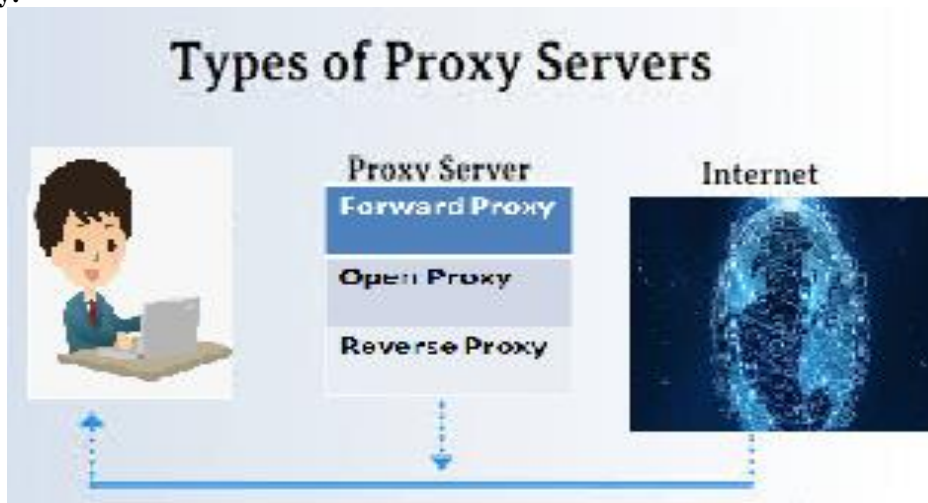
Functions of Proxy server :

- Network sharing and Network connection
- Caching a data in network
- Filtration of Firewall and network data

Reasons to use Proxy Servers:

- Monitor and Filter
- Improving performance level
- Relocation or Translation
- Accessing services anonymously
- To secure a data

Types of Proxy:



**1. Forward Proxy:**

Forward proxies are proxies where the client server names the target server for connection . Forward proxies are retrieves a wide range of sources from anywhere on the Internet. The terms "forward proxy" means forwarding traffic.

2. Open Proxy:

It is a forward proxy server that is accessible by any user on the Internet . There are thousands of open proxies on the Internet. An anonymous open proxy allows users to conceal their IP address while browsing the Web or using other Internet services.

3. Reverse Proxy:

A reverse proxy is a proxy server that appears to clients to be an ordinary server. Requests are forwarded to one or more origin servers which handle the request. The response is returned as if it came directly from the proxy server

Procedure for Set up a proxy manually:

- Open Settings.
- Click on Network & Internet.
- Click on Proxy.
- In the Manual Proxy Setup section, set the Use a Proxy Server switch to On.
- Type the IP address in the Address field
- Type the port in the Port field
- Click Save and close the Settings window.

Proxy server in Java:

A proxy server is a server s between the client and the server. Here client retrieve files from server always by request and server always fullfills clients request and sends relevant data to client. All requests that are coming from the client, are sent to the proxy server and the proxy server forwards that requests to the remote server on behalf of the client

Proxy is a structural design pattern and it provides an object that acts as a substitute for a real service object used by a client. The proxy object has the same interface as a service, which makes it interchangeable with a real object when passed to a client.

Some proxy servers are a group of servers that blocks common internet services. Like, an HTTP proxy intercepts web access, and an SMTP proxy intercepts email. A proxy server uses a network addressing scheme to present one organization-wide IP address to the internet.

Millions of people across the world use free proxy services for censorship filters, to improve security, and access websites that are not available in their region. ... But sometimes free services loses their privacy and security. Proxy servers are mostly not free. They are also browser-specific you can only use a proxy from your web browser. A VPN is used for more than just only website surfing.

A proxy server is a computer device or a software running on a computer that acts as an intermediary between an computer, and another server from which a user or client is requesting a service or a file . The proxy server may exist in the same machine as a firewall server or it may be on a separate server, which forwards requests through the firewall.

CONCLUSION

Major benefit of a proxy server is that it uses a cache and it fullfills all the users. If one or more Internet sites are frequently requested, these are saved in the proxy's cache, and whenever requested by user it will be provided to user. It improves user response time and also performance. When a proxy server receives any request for any data on Internet for any Web page, it looks in its local cache of previously requested pages. If it finds the page, it returns it to the user without forwarding his request to the Internet. If that webpage is not available in the cache, of the proxy server, then it acts as a client on behalf of the user, uses its own IP addresses and request the page from the server . When the page is returned, the proxy server relates forwards it on to the user.

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