

Parasitic Computing: A Review

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ABSTRACT

Parasitic computing is a method in which a normal authorised interactions with the help of another computer through the unauthorised interactions or we can say that the parasitic computing is a type of exploit or security exploit in which the program which is implementing the parasitic computing is unauthorised to the resources available in the computer at that time as we know that in today's era the name hacking plays a vital role in which the hacker wants an unauthorised access to the resources available in the computer of the host.

Keywords: Parasitic computing, Host, Sender, Receiver, Hacking;

INTRODUCTION

Prototype of Parasitic Computing

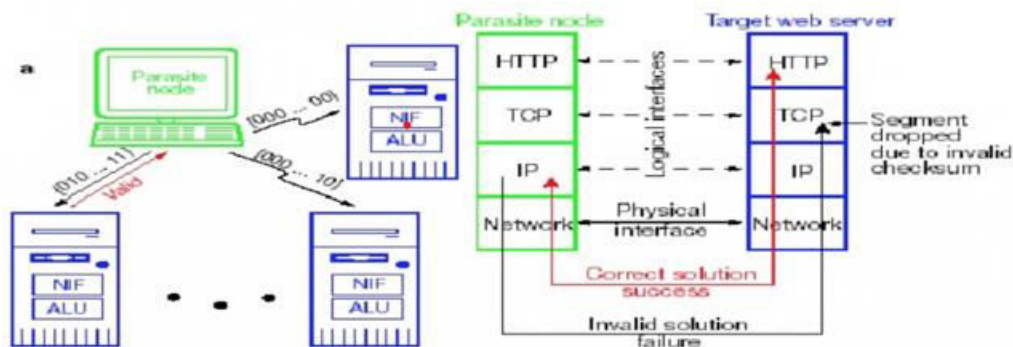


Figure 1: Prototype Parasitic Computing

Let us consider an example in which there are two computers communicating over the internet communication session always wants to access the host computer with the help of TCP IP connection as in TCP IP connection many sessions formed whenever a TCP IP connection is formed the two computers share their IP addresses to each other and can make a connection between computers let's consider an example in which the user have to solve a 3-SAT problem so the user

divides this big problem into the smaller ones and decode this as a relation between the checksum and the packet such that if the checksum is valid then the answer is correct and the checksum is invalid not correct checksum is also the answer to the question so the hacker divide the big question into the smaller ones send the checksum of the smaller portion to the host. The host then checks the value of the checksum and if the value matches the checksum correct value the answer is correct and if the checksum value is not valid then the host sends the acknowledgement to the user hacker to send another checksum and in this the sending and receiving the acknowledgement making the session between the hacker. Which interns making the TCP IP connection between the user and the hacker. [14] talks about the use of machine learning algorithms for medical purpose.

Parasitic computing plays an important role in the IT industry as the number of unauthorised access computers increased in the recent years most of the frauds happens today are also a type of a parasitic but parasitic computing give more attention the users the TCP IP connection over the internet protocol many users uses the TCP IP Protocol on the internet nowadays and the TCP IP Protocol makes the session between the user and the host so that this is easy to make a session and information resources of the host the server on the internet with the protocol of TCP IP can be hacked easily with this parasitic computing. And this creates for the servers on the Internet today as there is a lack of detection tools which can detect this type of unauthorised access to the server easily.

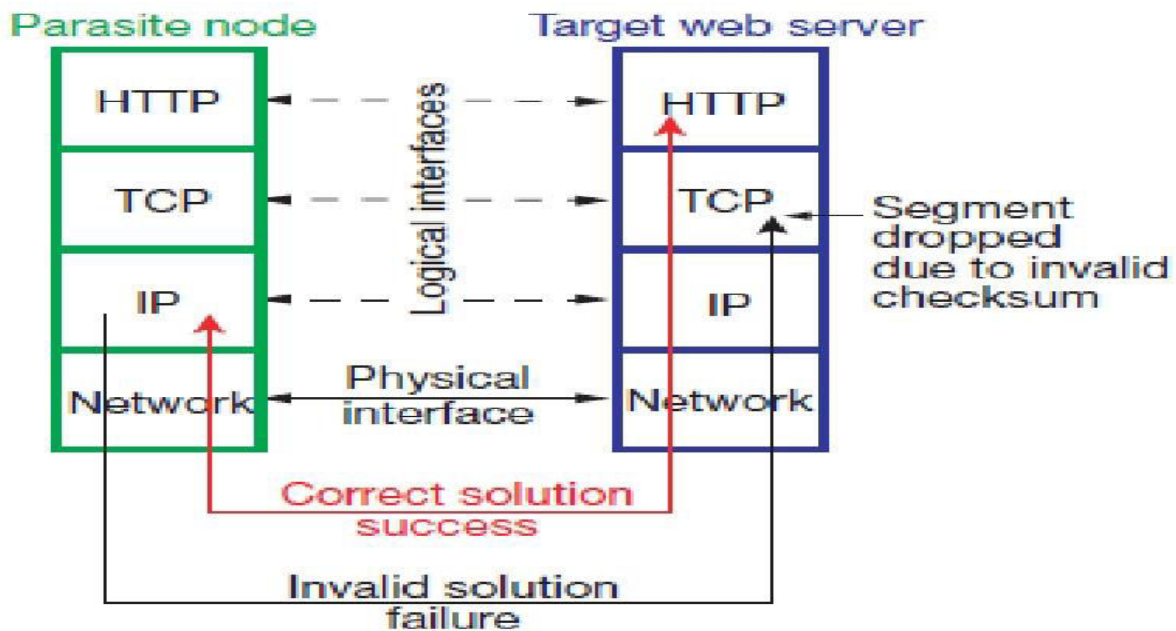


Figure 2: Architecture of Parasitic Node with target Web Server

The internet is a place where many ideas around the world getting shared every second Indian san millions of users uses the internet to get the information as whenever we want some information just pick up the phone Google in it whenever the Google opens we simply searches what information we

wants. Internet contains Millions bundles of data which is circulated over the internet every second. And every second a single user is getting crashed in between the hackers.

An example in which a user sends a request to the website which sends the request to the website the communication system In a machine break the request into the smaller information packets. There are many users present on the internet at the same time this makes the large opportunities the hackers to get the unlimited versus the time of communication between the different computers on the internet this will possibly leads to the area of different servers at the same time as all the computers runs on a TCP IP call to communicate over the internet and hence they need to make a TCP IP Protocol session to communicate this TCP IP connection with the help of the packets and the checksum value so today's era no one is safe while using this services over the internet and having a lack of parasitic detection tools main provoke the use of these computing and the hackers use these resources without any fear of being caught by the user.

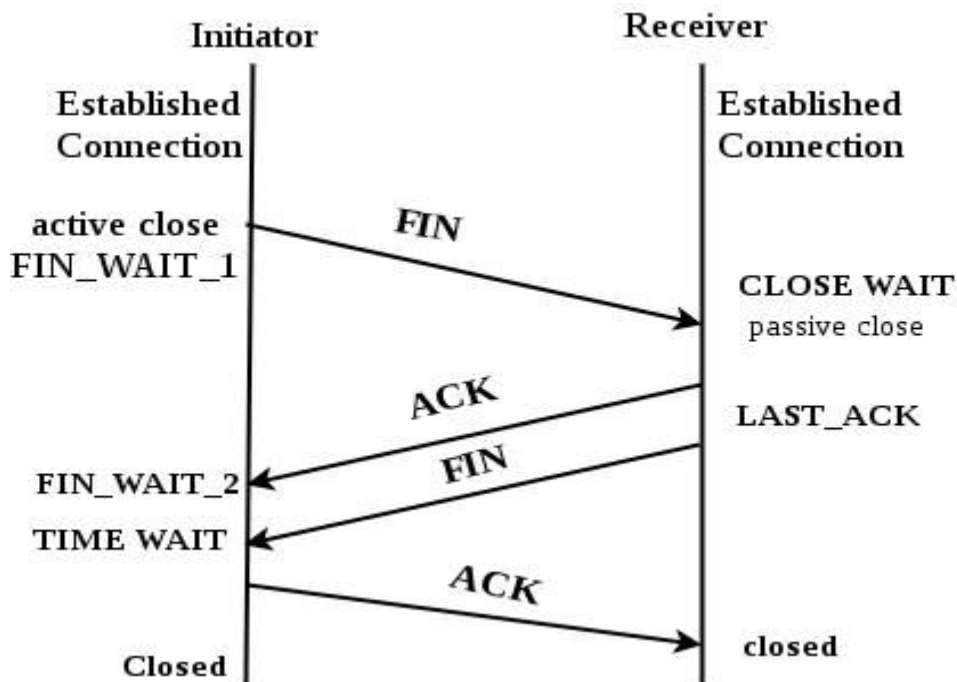


Figure 3: Basic TCP IP Protocol Communication Diagram

There are many ways to overcome this type of parasitic computing one of the greatest method to overcome such type of parasitic computing is that we have to divide bigger problems into smaller chunks and as we all know that there are many different servers available at the time and if we send all the chunked data or divided data through different service at the same time in this our data is divided into several job-lets and send through different service at the same time I will improve and having a low chance of a parasitic user attack power resources.

There are millions of hackers present at a time the hackers wants to assess our resources means of an unauthorised access to our documents which really important to us and these documents blackmail the users even sometimes to know about daily routine in some professional killers the daily routine

of the user is a mandatory thing to know about they want to know our daily routine so that they can follow us and can threaten us with the help of this parasitic computing method.

Parasitic computing is the concept similar to that of the distributed computing in which problems divided into many simpler so that it will affect the performance of computational model it will increase the computational capacity and decrease the chances of unauthorised access to a single program at the same time as our problem is divided into the smaller chunks and send through different servers at the same time as we have already discussed that the scientist always divided their problems into the smaller chunks and send it through the different servers to overcome this parasitic computer unauthorised access distributed computing is similar to that of the parasitic computing in some terms not all.

Details of parasitic computing

Parasitic computing is a method all the technique with which the user can use of resources the other user with the means of unauthorised access. And the technology which is parasitic computer used to exploit different kinds of such as TCP IP Protocol to get the resources which is remotely connected over the internet TCP IP connection any other particular protocol but basically when we use our internet TCP IP connection is made between the user and the remote machine and as we know that the name suggest the user for the hacker which requires the unauthorised access does not need any permission to get access to the files of the user. The various machines which are connected to the internet contain some packets in which the information is saved and the machine requires a minimum king of different packets information and unauthorised access to these packets makes a term parasitic computing so no one Can't Stop his or her machines room sharing such packets of information to the remote machines on the server.

Parasitic computing can also be used to solve different kinds of problems such as NP complete problems example 3SAT, circuit SAT etc and as we know that the problems such as NP complete problems and SAT problems is considered to be the most complex and toughest problems in the world this problems are time consuming problems which is a subset of set of all possible solutions. Parasitic computing help to solve this Complex problems in a given time frame or it can save our time.

diffrence between parasitic computing and cluter computing

Parasitic computing is different from that of as the cluster computing in which when computers are pooling their resources or distribute their resources so that it can achieve more speed in terms of computability or it can achieve the power equivalent to that of supercomputers possible as the resources equally distributed among different servers in different packets and chunks why the parasitic computing does not required any willingness open machine for any target machine to take participation in the problem solving factors.

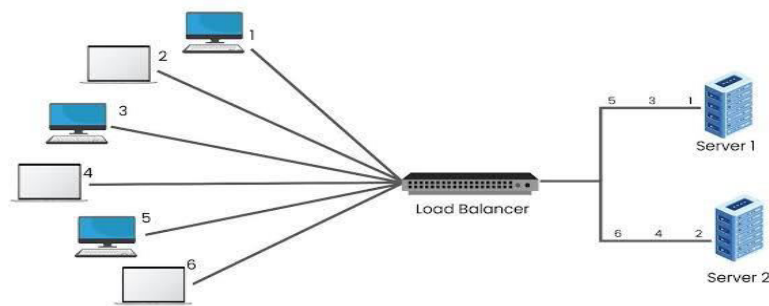


Figure 4: Connection Diagram

As when we divide our problem into different clusters for chunks distribute this problems too many service this can lead to decrease in the load on a single server or a machine at a time distribute our resources to different servers the computational performance the single-server increased as server only have to compute smaller problems is the performance of the single server and other problem is solved easily.

Different from Cracking

As we have already discussed that parasitic computing is the process of the unauthorised files on the internet protocol without any tracking of passwords for such types of methods so we can say that it is different from that of cracking. As in cracking the data is assessed through unauthorised access with malicious intentions and all the data is sent to the which is not needed also from the machine with unauthorised assess whereas in terms of parasitic computing we are only those resources which we need and in a constructive manner and only those resources which are made available on the internet but it can cause delay Americans are utilised by another without any acknowledgement to the user.

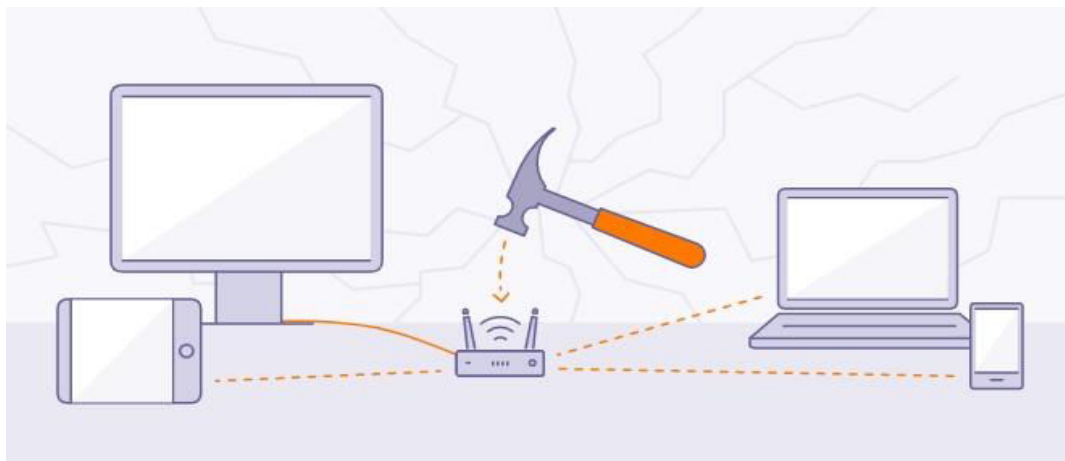


Figure 5: User Connection

In other terms cracking is usually a method of cracking some passwords or some unauthorised file access to get access to the resources within the file with the malicious intentions there are many types of crackers available on the market today different types of platform used to crack different passwords or files such as the Linux in which there are various methods such as airmon NG which is used to correct different types of passwords such as Wi-Fi passwords.

Parasitic computing review

There are different types of protocols or the standard protocols used by the internet and every standard protocols the reliable Communication on the internet. We know that these standard protocols are easily exploitable by hacker or any unauthorised user to compute with different communication Infrastructures by transferring the internet into a common distributed system in which distribute files or the information is divided into the smaller chunks or nodes and send these files to the different servers.

In [1] parasitic computing machine is the another machine requirements and pause the machine to compute the problems on the behalf of users machine by engaging these machines into the standard communication and the machine which is performing the computation the target machine is not knowing that is solving the Complex computations on behalf of the remote node.

Whenever a user sends any message on the internet messages are regulated by different layers of protocols so it is a sophisticated process. When a user [2] web page through the Uniform resource locator(URL) transmission control protocol connection is established by the web server and the hypertext transfer protocol request is initiated by the web server to every [3] TCP connection. Switch off the TCP connection carried out by the protocol(IP) which breaks these messages into the chunks and packets through many different routers in between the sender and the receiver and when the request for the http request reaches its targeting web server then its response is also sent back the same [4] TCP connection to the user browser.

There are two steps involved in the reconstruction of the original message which is TCP and IP and this message is finally interpreted or described over the [5] http level therefore as we have seen there are numerous amount of computation required for even a single request of the user which is best on the Internet and its different protocols to get success and the internet plays major role in providing trust among the users for their data.

The participation of different types of network over the internet for the distributed computing in a parasitic computing may involve different types of networks without there explicit knowledge. Distributed computing involves the of the complex problems over the internet through different servers but in the case of parasitic computing the nodes present are willing and also we can say that parasitic computing also effect the computation and the speed of the system in [6] case of http aur we can say that there is denial of service attack which is term as a parasitic computing over the internet decrease the speed at which the information is retrieved by the original user as their data is unwillingly or unauthorised assessed some other machine and he even don't know about this access. TCP or the transmission control protocol reliable transmission of data over the internet by providing the bit pipe between the users sender and receiver which is reliable method the reliability

of this method is depend upon the checksum which validates the value of different packets received and reliability is also depends upon the acknowledgement, retransmission also.

Routing [7] hope the information packets is done through the internet protocol(IP) which is below the TCP. Every correct packet of the information is acknowledged by the TCP and negative acknowledgement for every wrong packet received is also sent back by the TCP layer. The parasitic computing benefit of this acknowledgement and checksum to check the valid solution for the generated problem by working in a manner that only the correct value of the checksum is matched.

The parasitic computing targets different types of protocols such as HTTP, SMTP, SSH, FTP etc there are different types of steps followed by the parasitic computing:

1. Handcrafted packet is sent to the server.
2. Waiting for the acknowledgement and if acknowledgement is not received then time out.
3. One more packet is sent with appropriate value of checksum otherwise terminate the connection.

Also all the packets have equal [8] importance the user according to the solution to the problem asked. Parasitic computing is also performed through different application layers such as using the method of frames and embedded JavaScript for the complex computations. Page is divided into two frames when a user loads any webpage on the internet one is having high pixel value these frames contains the embedded JavaScript which the calls the host for different computations and finally send back the result to the server in this case can also use [9] the IP layer for the computation the IP layer has only 16 bit checksum value so there is a chance [10] dropping packets this leads to the congestion on the network because the packet is dropped at the first router itself and can't reach other routers.

Implementation of parasitic computing using TCP/IP

The communication over the internet sophisticated process as the communication involve sending the data or transferring the data layers of protocols the data is transfer from http to TCP layer and then the data is transfer from [11] TCP to IP layer and then to data link layer and finally reaches to the physical layer as a result the message or the information constructed back at the destination from which it is evolved we can use any of the above layers for the exploitation of the information but TCP is very beneficial for the process of parasitic computing the idea behind this approach is that the machine responses to the request without knowing who made the request and who is actually going to use this request in solving the complex computation problems by believing that the request is only made by the TCP connection layer only.

The non-deterministic polynomial problems are the main targets for the parasitic computing this is the most complex problems in the world and requires a lot of time them so lots of time is wasted in solving this type of problems the solution for such problems cannot be expressed in a polynomial time there can be large number of calculations done to evaluate the right solution for the problem. To exploit such type of problems checksum value is required, these [12] distributed problems there are many service at the same time these problems parallel and for every problem there proper checksum value. Let's discuss below what is the checksum value.

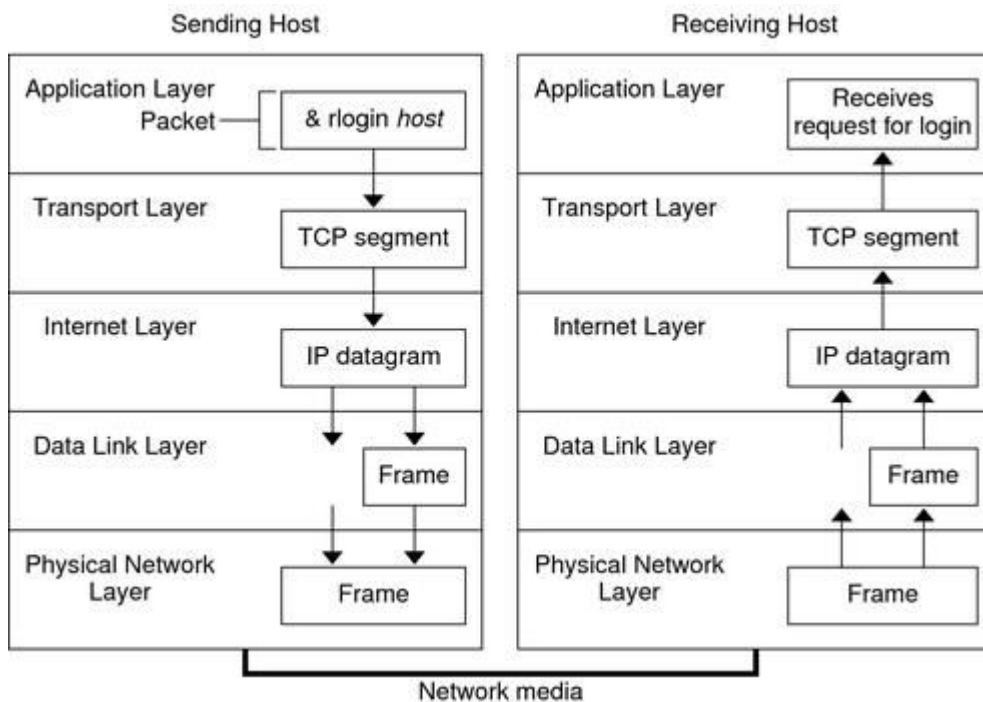


Figure 6: Sending and Receiving Hosts in TCP Connection Layer

Checksum value of TCP

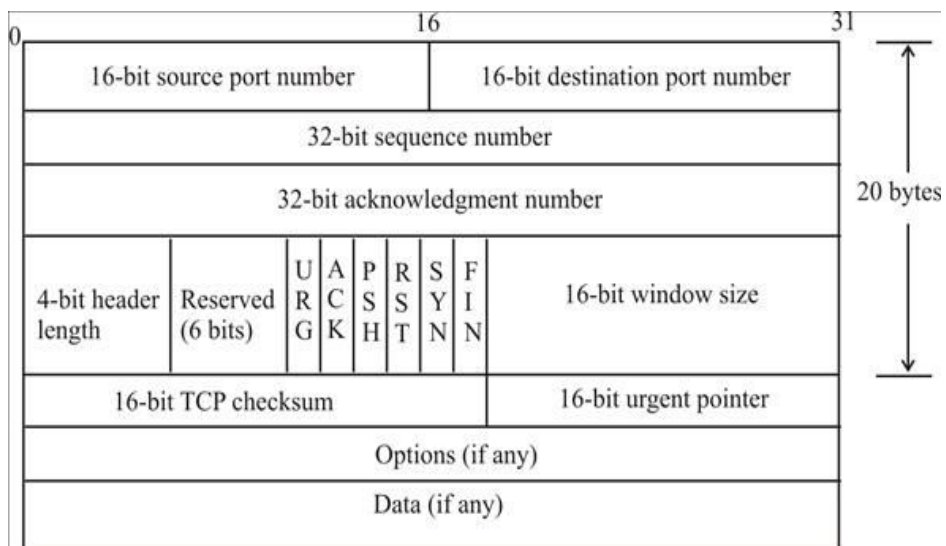


Figure 7: Checksum Value of TCP

The value of the checksum is 16 bit one's complement of the [13, 14] one's complement the sum of the header and the text. The octets to be checked sum if segment contains the odd number of header and the text. The checksum field is replaced with zeros and this information is transferred to

different layers protocols such as we have already discussed the information is sent http to the TCP from TCP to the IP layer data link layer and finally to the physical layer.

working of parasitic computing

Parasitic computing Works By simply sending the information to different servers same time and the different servers mutually or parallel these Complex problems the same time such that if the problem is big it can be divided into different parts and sending to different servers at the same time so that it can be sold and the solution obtained within even if we have to solve the large problems such as NP complete problems which is very complex problems in the world as the time taken the NP complete problems very large or millions of years to solve single NP problem.

Different checksum are associated with the single packet of information check some value is matched with the result if it is matched then sent to the http layer the TCP connection and Jackson value is retrieved by the IP internet protocol layer if the checksum is not matched for an appropriate solution then the packet containing same checksum values is discarded and the negative acknowledgement is sent again to the user but if matched then the web server send the request to the parasitic computer that it has received http request does in this way for the particular problem send Itech computer for a particular problem.

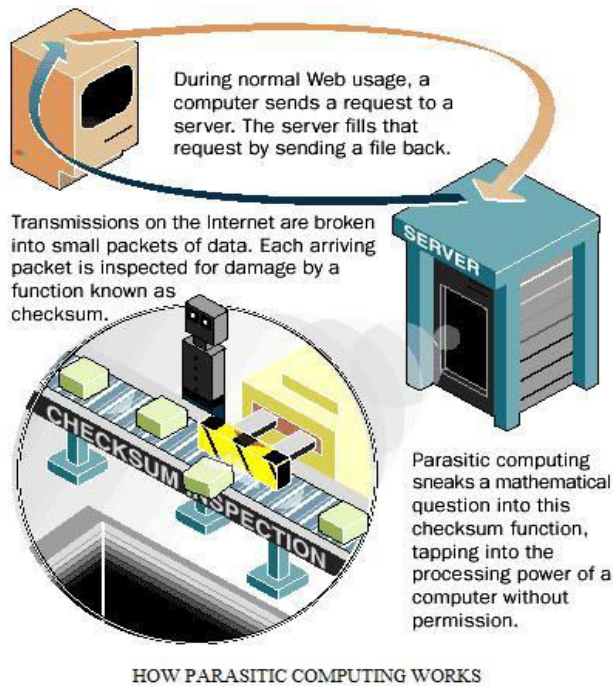


Figure 8: Parasitic Computing Working

Conclusion

Parasitic computing plays an important role in the IT industry as the number of unauthorised access computers increased in the recent years most of the frauds happens today are also a type of a parasitic but parasitic computing give more attention the users the TCP IP connection over the

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