Vpn

vpn is stand for virtual private net worl it is a secure network tunnelling .which is necessary if you access your private from a network that is another network depending on the other publuic address

ok let me break it down suppose your office has a private net work .and you have some important file here .but the problem is you can only access it if you are in the network.but now your in a different net work in order to access if you give a request the request will pass through other network and the destination router see that you have come from a different net work .it will reject.but if there is a vpn you can tunnel the net work so the pc will see that you can directly communicating with it and if the vpn server allow this pivate network tht you are using in other place you can access it

to do things in a simulation there will be three router connected with each other and each router have a private nework 192.168 series .

First router :inbound 192.168.0.1 outbound 10.0.0.1
Second router :inbound 192.168.1.1 outbound 10.0.0.2,11.0.0.1
third router :inbound 192.168.2.1 outbound 11.0.0.2

and all are routed in eigrp routing (you can use another as well)

so one computer in first router inbound (ip=192.168.0.100) will trace the other computer in third router inbound(op address 192.168.2.100) it will show that it has use the middle router(10.0.0.1 and 11.0.0.1) as a path .but when we use vpn and tunnel the first and last net work we will see that when we tracert the path.(remember the path only and the path source and destination has a separate ip) we will see that there is no middle router connection.

!)first give the ip and the routing of thee router and pc
2)we want to create the vpn between the first and the third router
3) go to the first router

first router:

Router(config)#interface tunnel 0   //create a interface tunnel and give that a name
%LINK-5-CHANGED: Interface Tunnel0, changed state to up

Router(config-if)#ip address 100.0.0.1 255.0.0.0 //give that an ip address that is not mathed with any other

Router(config-if)#tunnel source serial 0/2/0 //connection ta ber hoyar je connection (sohoj kothy jeta router diye ber hoise)

Router(config-if)#tunnel destination 11.0.0.2 // its the ip of the third router ip(not the private ip)
%LINEPROTO-5-UPDOWN: Line protocol on Interface Tunnel0, changed state to up

then go to the third router:

Router(config)#interface tunnel 0 //give the tunnel number exactly the same
%LINK-5-CHANGED: Interface Tunnel0, changed state to up

Router(config-if)#ip address 100.0.0.2 255.0.0.0 //set the ip address
Router(config-if)#tunnel source serial0/2/0 //outing serial
Router(config-if)#tunnel destination 10.0.0.1 //first router I address
%LINEPROTO-5-UPDOWN: Line protocol on Interface Tunnel0, changed state to up

ping from the first routers pc

from 192.168.0.100

result:

C:\>tracert 192.168.2.100

Tracing route to 192.168.2.100 over a maximum of 30 hops:

1	12 ms	0 ms	0 ms	192.168.0.1
2	0 ms	0 ms	10 ms	10.0.0.2
3	15 ms	10 ms	12 ms	11.0.0.2
4	11 ms	11 ms	12 ms	192.168.2.100

Trace complete.

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from 192.168.0.100 ping the 100.0.0.2 ehich is the tunnel last point

C:\>tracert 100.0.0.2

Tracing route to 100.0.0.2 over a maximum of 30 hops:

1 1 ms 0 ms 0 ms 192.168.0.1
2 58 ms 12 ms 6 ms 100.0.0.2

Trace complete.

See there is no middle connection.we successfully create a tunnel that bypass everything