Case Study Presentation

**Topic**

“The CEO of your organisation has a similar - smaller - network setup at a second site in Sydney. He would like you to explore the options and possibilities of linking the two networks together. He wants you to research alternatives and prepare a presentation for the board on possible approaches to solving this problem, and the pros and cons of each approach”

**Ideas**

|  |  |  |
| --- | --- | --- |
| Approach | Pros | Cons |
| VPN (Virtual Private Network)  -Used to connect remote employees or “networks” to the company’s network | -Strong security and privacy solution  -Provide Cross Compatibility  -Speed up throttled connections that ISP’s Limit such as streaming and other sources  -Easy File sharing between remote clients | -VPN does not solve security regarding server-side components such as logins and systems  -Some ISP’s revoke the use of a VPN entirely  -Limit the speed depending on the type of VPN created  -Increases the complexity of the network |
| Internet routable addresses  (assuming your IP is routable on the public internet)  (direct connections)  (file servers) | * Simple set up * Versatile for multiple all types of clients | -Very expensive  -Not secure |
| Peer to peer networks  P2P across Networks address translators  <https://bford.info/pub/net/p2pnat/>  <https://itstillworks.com/advantages-disadvantages-p2p-file-sharing-8434489.html> | * File sharing becomes incredibly easy * Not expensive at all, often can be done through the operating system * Is fast depending on the type of connection * In windows this can be done through windows domain which is a Microsoft only standard | * Relies on the client software for p2p connections * Can be very unsecure as users can simply download their own files straight of the network * Slow browsing speed as files will be downloaded when requested from other clients |

Areas of concern

* Distance
* Size
* Cost
* Technology

**Explanation:**

**VPN**

A Virtual Private Network (VPN) is a connection you can set up between two computers that establishes a secure path between a computer with public Internet access and a computer that is connected to a private network; such as the network at your place of business.

**IP Address:**

Your IP address is a behind-the-scenes number your Internet provider assigns your computer that allows you to go anywhere on the Internet. It's something like the house number on your home.

That's the good news. The somewhat "bad" news is that your IP address also gives away your computing location, at home or on the road. That bothers a lot of computer users.

**Peer to peer**

A peer-to-peer network is one in which two or more PCs share files and access to devices such as printers without requiring a separate server computer or server software.

**Different Types of connecting to networks (reference images)**

<https://kb.netgear.com/10365/Network-design-Different-ways-of-connecting-to-the-Internet#Diagram%205,%206%20and%207>