What does it do? (600 words) What is the state of the art of this new technology? What can be done now? What is likely to be able to do be done soon (say in the next 3 years)? What technological or other developments make this possible?

I work as Level 2 support engineer for a private medical company. The company's IT infrastructure works on a client-server architecture. I provide extensive support for both client software/machines and servers. Servers provide many different functions in a workplace and certainly mine. Our company has medical clinics all over Australia and this means servers all over Australia.

Servers provide many different functions within our company and are essential to the running of the company. My company hosts domain controller, email, print, file, SQL, application, web, media and back-up servers. In each clinic there is only 2 actual physical servers with multiple hard disks in each server. These are virtual hosts with the appropriate Operating System for the role of the virtual server. There are also servers that are centrally hosted which are used to host virtual machines/desktops. These virtual machines are then assigned to users and the machines appears as normal desktops to the user without expensive hardware.

Services/Applications that are hosted on these servers are as varied as the roles of the servers themselves. Some of these services/applications can be like Active Directory (domain controller) which allows for user management and security for user groups, software deployment and other group policies can be managed from this service. Specific business applications hosted on a server for use at client level. For example, there is a medical application that is used by Doctors to log patient data. This application has a simple GUI and is linked to the SQL server. This server is then backed up every 15 minutes to a specific back-up server on-site. This data is also replicated off-site to another cloud-based company who hosts the replicated data. This medical application is also linked to the print server and this allows doctors to print medical data from the application. I am just using this application as an example to show the close relationship between server and application/services.

Working for Medical company means that a lot of services are hosted on-site to protect medical data. However, the company does use Microsoft Office 365 both for software deployment and for cloud-based storage through One drive. This means that software does not have to be hosted onsite and taking up unnecessary space. One Drive also gives the ability to access data from any location without having to VPN into a work network. Cloud-based storage also eases storage issues with on-site servers. I would like to give more insight into cloud-based applications, but I do not support or work with cloud-based applications. I would imagine though that most business in the next 5 years or already have moved to cloud-based services.

I would say that in 3 years virtualisation is going to the replace most business IT hardware. Currently at my workplace there is a huge VDI (Virtual Desktop Infrastructure) project to replace clinics hardware with Thin clients. A Thin Client is a very basic computer optimised for remote connection to a client-server environment. Advantages of VDI are far cheaper hardware, no-onsite servers, greater data protection, better security and less pressure on LAN networks. Disadvantages of VDI reliant on a good and fast internet connection, sometimes hardware can be easier to

break, and network outages are very problematic. The current issue for the company is the replacement of hardware and poor internet connection around Australia.

What is the likely impact? (300 words) What is the potential impact of this development? What is likely to change? Which people will be most affected and how? Will this create, replace or make redundant any current jobs or technologies

The likely impact of virtualisation for business is the ease and the exchange of data. On-site IT services and hardware will eventually become scarcer due to virtualisation and the difficulty of troubleshooting remote equipment. As a support engineer there is sometimes limitations on remote support and requires on-site support. The issue with on-site support is that it is not easy to co-ordinate with the client and will affect ‘business as usual’ for the company. Virtualisation makes troubleshooting easier as it is far easier to breakdown where the possible source of the problems maybe residing. As everything is hosted centrally it makes communication between IT teams easier for maintenance and incidents.

People most affected are obviously those using the services day-to-day and those that support and implement the technology. In terms of big impact, it changes the dynamic of the IT industry and the way it is supported and delivered. For example, it is far easier to monitor a virtual machine and its health in comparison to a desktop. A desktop/Laptops requires constant updates, hard disk fail, different types of hardware require different types of drivers. These are the drawbacks of desktops/laptops and in my opinion will likely be made redundant or replaced in businesses.

How will this affect you? (300 words) In your daily life, how will this affect you? What will be different for you? How might this affect members of your family or your friends?

As I am at the beginning of this huge VDI project for my company it does it affect me personally. It means that I will be apart of the implementation and support of this change over. This means in my personal life that I will be studying and trying to understand how the technology functions to provide the best support I can for the technology. As this technology expands within the company this could potential mean I come closer to my dream job System/Engineer Administrator. The major difference in my life will be that I will be part of technology that is setting the way for businesses in the future.

Currently, it affects the time I spend with my wife because I am doing a lot over time to implement the VDI project. It also means that similar technology could be used where my family or friends work, and I hope it something that I will be an expert in the future.