**Interview - Systems Manager**

**Please tell us about your IT work. What exactly do you do?**

I am primarily responsible for the network and server infrastructure of the company’s South East Asia Pacific region. This includes network connections, network devices, servers, storage, and data centre facilities.

There are 3 primary data centres located in Sydney, Melbourne and Perth containing a total of around 90 servers that host the various systems and applications used by the business.  The majority of servers are Windows based with some Unix variants.  I’m responsible for managing, maintaining, monitoring health, utilisation, alerts, and also backup systems. I am also responsible for maintaining server operating systems, patches and security updates, and also virus and threat protection.  Nearly all servers are virtualised using VMWare and this provides the ability to maximise the use of physical hardware by loading multiple virtual servers on each physical machine.  Virtualisation saves cost by reducing the number of servers that need to be purchased and maintained, and also saves energy and space in our data centres. VMware also provides the flexibility to easily attach and expand storage and move virtual servers around between different data centres.

Some of the systems and applications running on the servers include Domain Controllers, File and Printer Sharing, Web Servers, Terminal Servers, Document Management Systems, CAD Design Applications, HR and Payroll systems, Project Management, Resource Management, and Relational Databases. Some other business applications such as ERP and CRM are hosted externally or in the cloud and I have some involvement with those also, but they are primarily managed by providers.

**2. Please tell us about the industry you work in.**

I work in the mining and manufacturing industry. The company has around 20 offices across Australia and South East Asia with around 500 employees.

The company consists mainly of engineers, CAD designers, project managers and service technicians. The company designs machinery that it manufactures and delivers to customers; which are mainly mine sites in remote regions of Australia and Asia Pacific. The business also has a large sales team, after-sales spare parts, services, and business support teams including ICT, Finance, HR, Quality, and EHS.

The employees are heavy travellers, such as the sales team who travel to meet with customers, and project managers and service technicians that regularly travel to mine sites to inspect and maintain equipment. People rely heavily on ICT services to operate as mines run 24x7.

**3. What other kinds of work do you have to do?**

I will often have projects or work with a particular project team in planning to deploy a new system, application, or upgrade an existing one. This requires scoping of the system requirements, looking at the architecture of the application whether it is web-based, thin/thick client, if it has a central database, if data can replicate across multiple sites, and so on. Then decide and plan how and where best to host the application to provide optimal performance for the end-users.

From time to time we need to relocate one of our offices containing a data centre and that requires planning and execution which can run 9-12 months. Other times our company will acquire another company and integrating systems can sometimes take years in addition to our existing duties.

**4. Who are all the different people you interact with in your work? Please tell us about them.**

I interact with many different teams and individuals:

* ServiceDesk team who are first line support and escalate issues to me for investigation.
* Other systems administrators in my team, I’m based in Sydney as the manager and others are located in Perth and Melbourne.
* Information Security team that are based in our HQ and responsible for entire global IT security, firewalls, VPN tunnels, and also SIEM (security incident and event management).
* Infrastructure team that are based in our HQ and responsible for global Active Directory, data routing and other standards.
* Application service managers that are responsible for major business applications, such as ERP, CRM, PDM (Product Data Management), etc.
* Vendors such as Telstra and others that provide our data connections to various sites, also external application vendors to assist with troubleshooting an issue or performing an upgrade.
* My manager and team to keep each other updated on what is happening and share thoughts and experiences.
* Other teams or departments in planning to deploy/upgrade an application as mentioned previously.

**5. Please tell us about your interactions with other IT professionals.**

As mentioned above:

* Other systems administrators in planning and executing tasks and projects
* Information security specialists in discussing and implementing security systems and measures
* Infrastructure specialists in discussing and implementing new network systems and changes
* Cloud services specialists in setting up and troubleshooting cloud based services
* Application specialists in deploying/upgrading and troubleshooting various applications.

**6. What about your interactions with clients or investors?**

My clients and investors are internal to the business. In a corporate environment investors are senior executives and key stakeholders that need to provide financial outcomes for the business. Ultimately my customers are end-users although I mostly work behind the scenes and customers are filtered through Service Desk.

**7. What aspects of your work do you spend most time on? Please tell us about these.**

Projects such as new systems/application implementations as mentioned earlier can take months of work.

For the past couple of years we have been working heavily on upgrading servers that are running Windows 2008R2 to later versions of Windows Server such as 2016 (due to Win Server 2008R2 reaching end of support on Jan2020). This requires quite some effort and working alongside application owners. We often build up parallel environments, perform testing of the system, then migrate data and it can take some time and effort for each system and application.

Some applications can also be somewhat high-maintenance and time consuming to maintain. They can be unreliable, tend to freeze up or have bugs. We put up with it because the business needs that application and there aren’t many alternative solutions available, or the business has invested a significant amount in the application however it never performed as reliably as expected even after years of fine tuning. We therefore deal with daily issues and manage it as best as we can until an alternative solution becomes available in the future.

Site relocations as mentioned earlier can consume almost a year in planning and execution; we recently relocated the Sydney site in 2018.

**8. Which aspects of your work do you find most challenging?**

Troubleshooting problems can be challenging, where an application or system starts to behave abnormally, becomes slow to access or completely inaccessible for some or all users.  In most cases nothing has changed to our knowledge. It can be anything from a data corruption to a routing issue to anti-virus software blocking some communication.

The past few years with everything moving to the cloud we are finding new challenges such as Windows/Office updates coming more frequently and seamlessly, they can often be the silent cause of a problem. Cloud service providers from time to time will also change a configuration which we are unaware and later discover requires changes to our firewall rules, it can sometimes cause many hours or even a full days of downtime for a particular system.

Some other challenges are finding time to maintain documentation and managing the ever growing storage requirements of the business.

**9. Finally, can you share an example of the work you do that best captures the essence of the IT industry?**

The essence of the IT industry in my opinion is the constant development of technology by a large community of specialists. My line of work is to identify which of those new and emerging technologies can benefit the business where I work by introducing efficiencies, streamlining and adding value.