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THE FORECAST IN OIL & GAS IS CLEAR WITH A TOUCH OF CLOUD

Due to the many commercial benefits and the world of possibilities, cloud computing is becoming a popular model for the IT savvy business that has growth on its agenda.

Yet, whilst being amongst the sectors that stand to gain most from cloud technologies, the adoption rate within oil and gas is slower than other sectors. Largely due to sensitivities around data security; safeguarding trade secrets and protecting intellectual property, but are these perceived threats real or just a hangup from the past? What specific advantages could oil and gas companies gain from the implementation of a cloud based IT system? And, how might cloud work in practice?

What Is Cloud Computing?

In general terms cloud computing refers to any hosted technology that provides software and/or IT infrastructure as a service. This can range anywhere from relatively simple web interface software systems that provide very specific functions, right the way through to vast computer networks with secure data storage and remote desktop virtualisation. The range is vast, making cloud computing a seemingly difficult concept to grasp without a very specific scope or circumstantial requirement.

'Public Cloud' relates to hosted software that is provided through a browser on a user-by-user basis with some online storage and sharing capabilities. This type of software is typically referred to as 'software as a service' and includes services like Google Drive, Windows Azure, Microsoft Office 365, or Salesforce.

'Private Cloud' is provided to a single company and is more akin to traditional IT infrastructure; hosted in a datacentre and placed behind a firewall. A private cloud is effectively your technology or technology that is leased to you and referred to as 'infrastructure as a service'.

'Hybrid Cloud' is often described as a combination of Public and Private Clouds, however, oil and gas has some specific requirements and there seems to be a more suitable 'Hybrid Cloud' model.

The 'Hybrid Cloud' More Suited To Oil & Gas

Migrating the day-to-day business function of a company's IT to a cloud based solution is comparatively straightforward. However, with the value of exploration companies being largely tied up in geological and geophysical data and the interpretation expertise of specialists, oil and gas companies have additional requirements for powerful processing of large data files and high utilisation rates of expensive human resources.

Although there are solutions being developed to serve very large files through cloud based systems, the technology is in its infancy and doesn't suit the demanding nature of oil and gas... yet. Data processing and graphical modelling requires workstations with very powerful processing capabilities and powerful graphics cards. This isn't standard network IT equipment and falls outside of the usual scope of a cloud based system.

The logical solution is to continue to maintain high power workstations under the operational control of the specialists that need them, whilst seamlessly integrating the software of the workstations with the cloud system for all other functions. This results in a true hybrid, not two systems running independently of each other with a convoluted link, but two systems that appear to operate as one.

This hybrid model addresses the very real concerns of oil and gas companies and gives them the very best of both worlds.

Oil & Gas Companies Stand To Benefit More Than Most

There are endless benefits to implementing a cloud based system, many of which centre around less waste and less hassle, but due to operational characteristics, oil and gas companies stand to benefit more than most.

The cost of implementing new technology can be expensive, sometimes prohibitively so. Once done, there can be a reluctance to continue to invest or renew in-line with technological advancements, resulting in out-of-date kit or legacy files and legacy software that hinders progress. Cloud systems make better use of technology, sharing infrastructure amongst multiple users and offices, offering a greater level of scalability and reducing the ongoing cost of implementation and continual development.

Professional cloud systems are not only hosted, but also managed and benefit from dedicated and centralised support. Hardware upgrades, software upgrades, hands-on technical support can all be provided at the drop of a hat, enabling oil and gas companies to respond quickly to operational developments and third party requests. No longer being at the mercy of on-the-ground IT consultants and their busy schedules.

By nature of the industry, oil and gas companies often have the requirement to link multinational offices. A centralised system gives staff immediate access to the information they need, when they need it. Traditionally companies would try to manage some level of file versioning, whether it be through checking-in / checking-out files or appending a version number to a file name. Whilst these manual processes are a good work-around, they are hard to manage across multiple locations and increase the chance of human error, duplication or data loss. Having a centralised file server with a place for everything and everything in its place eliminates file management frustrations.

Knowledge transfer and collaborative working is vital to the efficient utilisation of expensive human resources. Cloud networks maximise productivity, providing a platform for real-time collaboration across your entire workforce and network of consultants.

oil and gas companies also have the requirement to share sensitive files amongst stakeholders, whether they be remote teams, suppliers, investors and especially joint venture partners. Having a shared space on your network with controlled permission based access gives oil and gas companies the ability to share sensitive files without risk or hassle of transferring them via email or through the internet.

Remote working is now the norm for many oil and gas company principles, either working from multiple offices, home or on the road. Having the entire company network at your fingertips is the difference between feeling connected and feeling slightly out of touch. The ability to access files securely on the fly through any internet enabled device is a huge benefit to transient oil and gas staff. Accessing files on mobile phones or tablets gives stakeholders a level of connectivity not feasible until now. Travelling with sensitive files contained on your laptop is a potential security risk and recovery proves far more costly than if the files were securely locked down within your own private cloud.

The storage of sensitive files and data is only perceived to be safe behind the locked doors of an office, until the day the office is ransacked, burnt down or flooded. With multiple offices, often in inhospitable regions around the world, the potential risk is magnified. Placing storage in the cloud negates the need to manage and maintain onsite storage and complicated backup solutions. Professional cloud based solutions are hosted in physically secure datacentres behind secure firewalls, completely eradicating the worry of file storage and file security. Recovering from a localised catastrophe is as simple as getting a new device, connecting to the internet and signing yourself back into your virtual desktop.

Private cloud infrastructure is inherently secure. Hosted in very tightly controlled datacentres, behind dedicated firewalls. The level of access security can be customised with authentication for the network, authentication for each application, or even the addition individual PINS and keyfobs. Cloud is arguably more secure than traditional networks and desktops.

Software sharing is also possible in a private cloud. Some software creates files that are easy to share, but larger more complex software like finance systems or CRMs store the information within the platform. Hosting software within the cloud increases the reach of that software to anyone that needs access. This opens up the whole world of expert consultants that can assist with operational activities.

The Forecast for Oil & Gas IT

Early adopters will see the benefits, reap the rewards, free up time, be more productive, open their operations to expert consultants and gain a significant competitive advantage. As comfort grows around hosting IT in the cloud, opportunities to extend the benefits will be recognised and we'll see companies continue to invest until our devices are simply portals.

Remote working will no longer be a painful inconvenience to have to contend with, but will provide a sense of freedom that will enable people to focus their attention on their expertise without IT getting in the way.

Information and knowledge silos will be a thing of the past. Everyone will have access to everything they need, when they need it. Employees that leave will no longer walk away with all of the company's knowledge and experience.

Processing that would normally require the power of a desktop computer will be executable through any internet enabled device and even the browser of a mobile phone – from anywhere in the world. Results of which will be immediately accessible to anyone you wish.

Complete control will literally be in your pocket and with you always. And this vision of the future is all technically a reality of today.

The forecast for IT in the oil and gas sector is clear with a touch of cloud!

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