INSIGHTS INTO

J James Hughes is the co-founder and Chief Technology Officer at Applied Cloud Systems and has over 20 years of experience in information technology serving in both senior technologist and leadership positions. In addition to James' experience, he holds multiple advanced Microsoft certifications, has won awards for his work, and has been featured in publications for his ability to develop innovative solutions.

How do you define what the "Cloud" is? What makes the cloud different than a data center?

There is some confusion and debate in the technology community around the definition of the Cloud. To add to that confusion, we see a lot of traditional data centers or hosting companies attempting to rebrand themselves as "Cloud". A basic definition would include using software or services where you don't manage the underlying infrastructure. While this is a good starting point, there are a number of additional characteristics that are essential to defining a cloud provider. First, self-service capabilities must be a core capability where end users can request, configure, and manage services. The top cloud providers enable this through portals, script-based languages, and APIs. If you have to enter a support ticket to make a change to a server or firewall, you are likely not dealing with a true cloud provider. A customer should have full control over their entire environment in the cloud. Second, a mature cloud provider will allow for granular billing down to minutes or seconds. One of the biggest drivers to cloud adoption is the "rental model" where you are only paying for what is used. Finally, cloud providers must enable elasticity where users can scale up and down based upon demand.

What challenges do you see customers facing when it comes to cloud computing?

The most common challenge we see, repeatedly, is in-house knowledge and expertise as it relates to cloud computing. Most companies have lightly experimented in one public cloud or another, but there is still a lot of opportunity to understand all of the available services. Along with general capability knowledge, there is usually a large gap in skills when it comes to topics such as security and infrastructure as code. Companies with a high degree of cloud maturity have invested in upskilling their existing resources in these areas and developed centers of excellence focused on the cloud.

What are some common myths or misconceptions you experience when talking with customers about cloud computing?

The biggest misconception is related to cloud security, with some believing that the

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cloud is not secure. This couldn't be further from the truth, but some organizations do struggle with the thought of delegating certain security controls to a 3rd party. To help in this area, it is important to ensure proper knowledge of security capabilities are known and understood. While it is true that security controls are different in some cases, customers still possess significant control over their cloud security footprint. The biggest challenge is not that security controls are available, but instead, properly implementing the available controls.

A second misconception revolves around

the cost of the cloud. Some will indicate that the cloud is always cheaper, while others insist it is more expensive. The real answer requires much more thought and analysis than a blanket "less or more expensive" statement. We have worked with organizations using co-location facilities and the cost of ownership comparison was straight forward in favor of cloud migration. Other companies have made significant infrastructure investments, where a mass cloud migration is not cost effective. Each company and use case is different, but proper analysis will identify which workloads have the right ROI for the cloud.

What trends do you foresee in the next 2 to 5 years?

We are seeing a lot of momentum in cloud adoption and that trend is likely going to continue for many years to come. This is largely due to a better understanding of cloud capabilities, and the dissipation of fears related to security. As a Microsoft partner, we have seen acceleration in companies signing pre-commitments to Azure between 5M and 500M over 3 years. This activity will likely translate into more workload migrations and the shrinking of customer owned data centers. It is highly unlikely that companies will completely shutdown their on-premises data centers, but we will certainly see the ratio of on-premises to cloud move more towards the cloud.

What type of services (SaaS, PaaS, IaaS) are the biggest growth areas that you are seeing?

Most companies have been well under way transitioning away from installed software to Software as a Service (SaaS) offerings for a number of years. While this will continue, a large percentage of companies have a significant presence with SaaS based applications including Office365, ServiceNow, WorkDay, and Dynamics365. In addition, Infrastructure as a Service (IaaS) migration will continue, but this area has slowed in favor of application modernization that involves either containerization or re-architecture into platform services.

In contrast, Platform as a Service (PaaS) offerings are getting a lot of interest and are most in demand right now. We have customers that are looking to reduce the need to manage workloads at the operating system level, and PaaS services are a perfect fit for this. Within the PaaS space, Data & AI and Web Application workloads are the focus area where it is no longer necessary to manage physical or virtual machines. Instead, users can spin up platform-based instances to host their applications, while the cloud provider ensures the underlying infrastructure is managed, patched, and maintained.