Entering the Cloud

The Brave New World of Cloud

Cloud computing is transforming the way businesses operate and meet their customers' needs. Companies of every size, working across a wide range of industries, are adopting Cloud-based products, becoming more agile and better-equipped to compete in challenging markets. You can even see the Cloud as a great leveller. In the words of Dr Werner Vogels, CTO of Amazon, "The Cloud is enabling continued innovation because entrepreneurs and big companies alike are able to gain the resources they need to put their ideas to work." The Cloud, Vogels believes enables them "to take advantage of resources previously unavailable without a trip to the procurement department."

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Delivering services and applications over the Internet is nothing new. We've all used Web-based email, and many of us have used online storage or backup services. What is changing is that more and more applications are coming online, driven by innovative ideas, the lure of cost reductions and the availability of faster, cheaper and more reliable connectivity.

Cloud computing is only getting bigger, and we can't afford to ignore it. End-users like it. It gives them the convenience of working anywhere and the ability to access information on any system at any time, and they're already using Cloud-based services on their PCs, tablets and smartphones. Businesses like it. It reduces the risks and pain associated with procurement, replaces Capital Expenditure with more predictable Operating Expenditure, and it easily and affordably scales upwards.

Core Concepts

Cloud computing might seem complex, but when you break it down it's all about moving applications and data from a physical network on the client's premises to an integrated service platform in a data centre. This might involve client-owned servers or hosted servers hosted in a nearby data centre, virtualised server infrastructure, like Amazon Web Services EC2, or a Cloud application platform, like Windows Azure. Cloud-based applications might also have to be integrated with existing on-premises solutions, or even with public Cloud services. If so, there needs to be seamless interoperability.

The key thing is that you don't have to start from scratch. Not every company has the resources to build and manage its own data centres, and if that's what your applications need, then you can easily partner with someone who already has everything in place. Similarly, while it's possible to start working directly with a platform like Amazon Web Services or Windows Azure, there are technical issues and processes that can make doing so challenging without experience and expertise behind you. You might prefer to have a partner on your side that is already conversant with the core technologies, and knows what works and what doesn't. Sometimes, it helps to have a safe pair of hands that can guide you to those products or services which will be most relevant to the job at hand.

Taking this approach, you can build products and solutions without needing to worry about the platforms and the infrastructure that those products and solutions need to run on, and in some cases you don't even need to handle the applications.
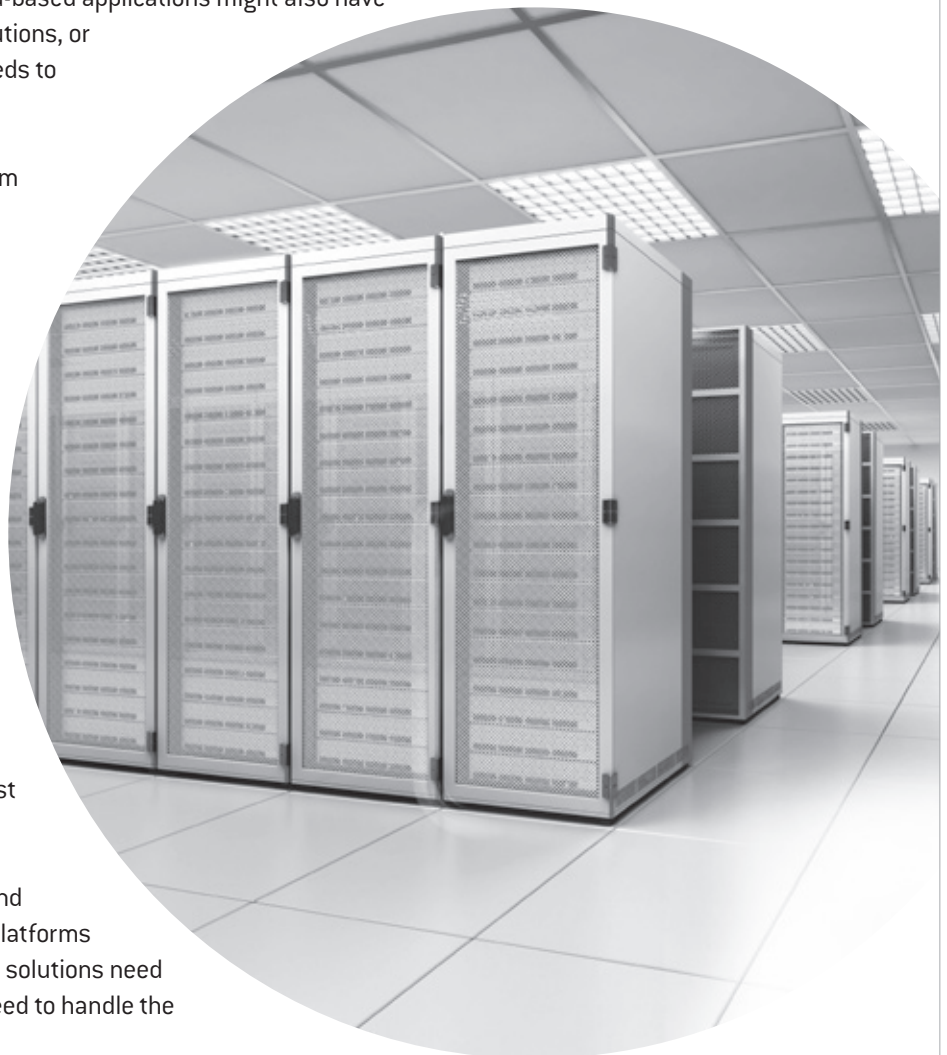
Steps to the Cloud

There's no one way to move into the Cloud. In fact, there are as many approaches as there are customers and applications. For one company, moving email or mission-critical databases to the Cloud might work – providing they find the most effective approach. For another, it might not be so fruitful.

The key thing is to think carefully about which would benefit most from a Cloud-based approach. Applications that involve collaboration, particularly between employees working across multiple geographical locations, will be an obvious fit. Website hosting, business application hosting, online backup and disaster recovery are all natural services to offer from the Cloud. Consider Software as a Service options. Could you take Exchange or SharePoint from on-premises servers and offer them from the Cloud?

While a business can theoretically set up a private Cloud or work with AWS (Amazon Web Services) or Windows Azure themselves, it's much, much easier if they partner with someone who can do the legwork for them, and hand them integrated solutions that just work. They can provide the tools a business needs to manage their data and their applications, keep the platforms and software updated, and provide support.

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Important Factors

Before you take any steps, however, there are a couple of things to consider. Firstly, connectivity is all important. Any Cloud platform or application is only as good as the connection between it and the customer. Connectivity needs to be both part of the solution and relevant to the applications being used. Get it right, and you end up with a smooth-running system. Get it wrong, and connectivity becomes the bottleneck or point of failure.

Secondly, you need to think about your platform. For some customers and applications, a public Cloud environment will be perfect. For others, a private Cloud environment is the best approach. In that case, the data centre becomes the core component in the mix.

The Ideal Cloud Data Centre

It's not hard to find rack space or managed hosting in the UK. It is more challenging, though, to find a data centre that's ideal for the delivery of Cloud-based products and services. For that, you need someone who can provide the full range of hosting and co-location services. You need someone who can provide redundant power supplies, a high-performance network infrastructure and multiple paths that connect the data centre to the wider online world.

They will also need to provide robust backup and disaster recovery systems, and the kind of service and support that you can count on. Finally, they need to have security: both network security to protect the servers and infrastructure, and physical security to control who can access your equipment and when. All of the above needs guarantees.

Don't go it alone.

The big mistake is to put the technology first. For instance, there is always a lot of talk around the delivery models for cloud - Do you go SaaS, PaaS or IaaS? – when what you really need to consider is the company's needs, and how those needs would be best served. The truth of the matter is that success comes down to finding the right services, matching them to the right delivery model, and finding a provider that you can rely on. A provider that can understand the different products and delivery models, and we how they all apply in practice.

The natural starting place is to look at the products, applications and services you use already, and at whether moving these might make your company more flexible, more agile and better equipped. Cloud-based services aren't always the perfect fit for every application, and some companies are more geared up than others to adopt a new approach. Yet it's also a mistake to be too timid; it can mean missing out on advantages that your competitors will exploit.

But while Cloud is a disruptive trend, we also know that end-users want it. They're already using cloud-based services on their laptops, tablets and smartphones, and it's only natural that they'll want some of that flexibility and convenience at work. Companies that embrace this drive will be well on their way to Cloud success.

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