

# Focus Experts' Briefing: 5 Ways to Explain the Cloud

March 4, 2011

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## 5 Ways to Explain the Cloud

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### Executive Summary

Cloud computing is a hot technology that can mitigate many business pain points across a broad variety of industries. Unfortunately, technology advances at such a rapid speed that it's often hard to explain the concept and business value to non-tech-savvy professionals. Seeking a stimulating discussion, Focus Expert Adviser Ben Kepes asked the Focus community, "What's your definition of the cloud?" and supplied the National Institute of Standards and Technology's (NIST) definition as a starting point:

"Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. This cloud model promotes availability and is composed of five essential characteristics (on-demand self-service, broad network access, resource pooling, rapid elasticity and measured service); three service models (cloud Software as a Service [SaaS], cloud Platform as a Service [PaaS] and cloud Infrastructure as a Service [IaaS]), and four deployment models (private cloud, community cloud, public cloud and hybrid cloud)."

Using the NIST definition, many Experts and community members participated in the thread, offering a variety of different analogies that will help any professional understand the concept of the cloud.

Investments in cloud computing have been critical to driving many businesses' success, and there's no better time for professionals to understand the risks and benefits. As Focus Expert Steven Romero says, "If the business is to have any chance of determining when investments in cloud computing are right for their enterprise, they need to understand what [cloud] computing is... the days of excusing themselves from the conversation because it is "technical" should be long gone."

In this Focus Experts' Briefing, we've compiled the best explanations and analogies that will make the concept of cloud computing crystal clear to even the least technologically experienced individuals. After reading this guide, be sure to check out the entire discussion and join the conversation:

<http://www.focus.com/questions/information-technology/whats-your-definition-cloud/>.

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## The “Cell Phone” Explanation

“Cloud computing is a re-branding of existing Internet technologies into a utility-type function that encompasses the best of dynamic, high available, fault tolerant, capacity-on-demand techniques. Similar to your monthly cell phone service, you use the service without the knowledge of what goes on behind the scenes and expect the service to be available 7x24.” (Morgan)

## The “Time Share” Explanation

“I’m always amazed that we talk in acronyms and components but can’t seem to deliver the 25-second pitch on what the cloud is. That an industry full of so many brilliant people can be so foggy about the cloud is the very reason my company tag line is ‘The Cloud Beyond The Fog.’ ‘The Cloud’ is a marketing term, and a poor one at that — not just an IT term poorly marketed. Private, public, IaaS, PaaS, SaaS (and on his server farm he had some drives, E-I-E-I-O)... I personally hate the term, and I sell it all day long. It’s a lame name. It’s vague and ethereal and complicated. No wonder smart businesspeople are foggy about it and uncertain how to benefit from it. To get beyond the alphabet soup of acronymity, I tell my business clients that the cloud is just 21st century time-sharing with systems and resources more powerful and reliable than any mainframe of the past. Whether they need a dev environment, a DR target or an application, those old enough to remember the 70s get it instantly, without me explaining PaaS, IaaS or SaaS to them. True cloud computing puts the greatest point of failure at the user’s end of the connection. And it delivers platforms, dev environments, storage or software 24/7/365 with little margin for error, excuse or apology other than what happens at the OS or application layer. People rarely wonder if the power that lights their office was generated with coal, natural gas or nuclear energy. Cloud computing will have come into its own when apps and storage ‘show up’ on the endpoint as a utility, rented without capital expenditures, and with neither regard for where the app is hosted nor a thought about reliability. Done right, it’s just 21st century time-sharing.” (Furey)

## The “Pay for Use” Explanation

“To me, cloud at its core is defined as ‘access to what I need, when I need it, and I pay for only what I use.’ Embedded in this is elasticity, high availability, and capability for access from any Internet location. The three main layers of cloud then break down by what the consumer wants to be someone else’s problem:

SaaS: ‘Deliver an application I can configure for my needs, and take care of everything underpinning that’ (examples: Google Apps, Microsoft BPOS, Salesforce.com).

PaaS: ‘Deliver an infrastructure and development platform I can build and deploy custom applications on, and take care of...’ (examples: Force.com, Google Apps Engine, Microsoft Azure, Amazon Elastic Beanstalk).

IaaS: ‘Deliver an infrastructure-only platform I can build and deploy server instances on, and take care of...’ (examples: Rackspace CloudServers, Amazon EC2 and S3).

These layers have important distinctions; some people simply need CPU/RAM/storage instances to scale out or in; others need a place for their developers to rapidly deploy applications without involving infrastructure people; and many want a full off-the-shelf application delivered without investing heavily in equipment or manpower. The notion of ‘private cloud’ depends on your point of view. If you’re building the infrastructure, it’s not cloud at all. If you’re a consumer, it may be cloud-like (and probably IaaS or SaaS) if resource management and investment are completely invisible to you.” (Comerford)

### The “Microsoft Commercial” Explanation

“I like the NIST definition and use it whenever I am talking to someone seeking a technical definition. For non-technical folks who have seen the [Microsoft commercials](#), I tell them that the cloud provides the ability to request computer services in the same way one searches for a flight from DC to Atlanta. There is no concern for the plane's engine, no checking flaps before takeoff, and no checking the sobriety of the pilot. One has a certain amount of time and money and uses that to get from DC to Atlanta by requesting a service. If the service fails, one penalizes the service provider (free ticket, free hotel accommodations, etc.). Most folks get this. The Microsoft commercial, while some argue it is not really about the cloud, helps to get folks thinking about the possibilities.” (Breeland)

### The “Acid Test” Explanation

“While some view NIST's definition as a bit ‘bureaucratic,’ it is relatively concise (i.e., a [two-page MS Word document](#)) and a result of consensus across many parties. As a result, it is a great starting point for culling out a short definition. When asked what cloud computing is, I usually provide the following: ‘There are a lot of buzzwords out there. Cloud is a buzzword of current popularity. Stepping back, true cloud computing provides computing services (be it applications, storage or whatever) to you as a utility. You don't need to get hardware or commence IT projects to set up it. You pay for what you use, and no more. Like a utility, you can ‘turn up’ or ‘down’ what you need without complex projects, changes in your expected performance, and so forth. Stepping back, a lot of people claim to provide cloud-based services. Some of these are true clouds. Some are only ASPs pretending to be cloud providers. Others offer the configurability of SaaS but lack the expected ‘rapid elasticity’ of what a real cloud offers (we have all been there, one part of the architecture is limited by a really big, multi-CPU database). When I hear someone say they are a cloud provider, I use [two acid tests](#) to see if it meets my definition of a ‘true cloud’:

The Self-Service Test: Can I do everything myself, or do I need their teams to do things? If I don't get self-service, it is not a cloud? If their developers need to actually submit a software build to configure what I want, they are clearly an ASP.

The Elasticity Test: Can I scale demand up by a lot (not by three times but by 100 times to support volume from a Super Bowl commercial or American Idol voting), either automatically or with a few hours' notice? Does my performance remain relatively constant (and my cost go down)? If so, I am on a ‘true cloud.’ If not, I am only getting SaaS-based delivery.” (Haughwout)

### Read the entire discussion, and join the conversation:

<http://www.focus.com/questions/information-technology/whats-your-definition-cloud/>

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