



## The 4-1-1 on IaaS

**By Marc Malizia**

Chief Technology Officer, RKON Technologies

Cloud computing remains a hot topic within the enterprise, continuing to gain momentum and revolutionize the way we do business. Supporting the growth and reliability of the cloud, Infrastructure as a Service (IaaS) is one of the three cloud computing service delivery models that serve as the cloud's backbone.

To begin, let's review the different types of delivery models before taking a deeper dive into IaaS:

- **Software as a Service (SaaS)** is a software distribution model in which applications are hosted by a vendor or service provider, made available to customers over a network, typically the Internet.
- **Platform as a Service (PaaS)** is a category of cloud computing services that provides a **computing platform** and a **solution stack** as a service. The consumer creates an application or service using tools and/or libraries from the provider. The supplier provides the networks, servers, storage, and other services that are required to host the consumer's application. PaaS offerings facilitate the deployment of applications or services without the cost and complexity of buying and managing the underlying hardware and software and provisioning hosting capabilities.
- The final delivery model, IaaS, is a model whereby an organization outsources the equipment used to support operations, including storage, hardware, servers and networking components. The service provider owns the equipment and is responsible for housing, running and maintaining it. The client typically pays on a per-use basis.

If we look into the SaaS and PaaS models, it becomes clear that these services are based on the provider leveraging IaaS services as the underpinning upon which a software application or development platform is delivered. IaaS really is the basis for delivering cloud services regardless of the model or combination of models your company selects.

IaaS is generally delivered via a virtualized environment where physical servers and storage are hidden beneath an abstraction layer that delivers virtual servers and storage to the end user. Through virtualization, service providers can create a multi-tenant computing environment capable of rapid expansion and grand scale while delivering a cost effective platform making it perfect for IaaS.

By reviewing a list of CIO top priorities for this year, we can better understand the importance IaaS plays in the 2015 business environment. Based on a list of top 10 CIO priorities, released by [Information Management](#), disaster recovery



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was rated at number nine. Over the last couple of years, disaster recovery services have gone from big-ticket items to cost effective solutions offering aggressive service level agreements. One of the main drivers of this decreased cost and increased service is the proliferation of cloud-based disaster recovery providers. These companies leverage a virtualized, multi-tenant infrastructure, namely IaaS, to provide their customers with a reliable disaster recovery platform, eliminating the rooms of hardware dedicated to a customer sitting idle waiting for a disaster declaration. IaaS is the main reason these providers can offer disaster recovery services at such an affordable cost.

In the same poll, cloud services ranked as the number two priority for CIOs. As reviewed above, all three of the cloud delivery models are powered by IaaS, making it a vital element of these initiatives. The SaaS market is poised to explode in 2015, as it appears to be a win-win for both the manufacturers and its customers. From the manufacturer perspective, hosting their software allows them to maintain and support a single code train greatly reducing support efforts and development costs. All support volume associated with software installation and software conflicting issues due to local installations are also eliminated. The manufacturer builds in a recurring revenue stream and assures the latest code is always in use.

This platform also allows the manufacturer to easily let customers try new products or modules, as they have a captive audience constantly on their website. Customers can also take advantage of a number of great benefits. The SaaS model typically provides a lower cost than what the customer would pay to have the same services done in-house. Furthermore, customers are alleviated of the tasks and associated cost of deploying and upgrading the applications as well as maintaining the systems needed to run the software. Ability to change license count on a monthly basis is also a great advantage.

Other items on the poll were cost reduction and consolidation. In most cases, moving servers to an IaaS provider will reduce server, storage and hardware cost by up to 25 percent over building the same solution in-house. IaaS services can also facilitate data center consolidation projects or allow companies that have not completely virtualized their operations to do so, thereby reducing cost and consolidating server and storage footprints.

So, as CIOs increasingly turn to IaaS to achieve their 2015 priorities, they will realize that the benefits of IaaS expand far beyond helping them achieve their task lists. IaaS and IaaS-based services, such as the hybrid cloud, are key to elevating a seat at the executive table—helping take executives from technology implementer to drivers of business strategy. A hybrid cloud is a composition of two or more clouds (private, community or public) that remain distinct entities but is bound together, offering the benefits of multiple deployment models. The hybrid cloud can also provide the ability to connect collocation, managed and/or dedicated services with cloud resources.

Though not a magical pill, the hybrid cloud is a requirement for this type of transformation taking place in today's business landscape. Enabling an agile, scalable and cost effective infrastructure, the hybrid cloud allows IT to quickly accommodate even the most demanding business requests. Delivering solutions to the business in a timely and cost effective manner helps build credibility and showcases IT as a "can do" organization versus a roadblock.

With a renewed reputation, the business units will pull IT into their projects proactively, thereby reducing the shadow IT movement and returning control back to IT. With this precious new gift of trust, combined with the hybrid cloud, IT can



provision applications on their private cloud when a higher degree of security or compliance is required, while leveraging the public cloud for applications that have lower security requirements but need to burst. The increased efficiency, business trust and reduced shadow IT will enable IT to begin driving the digital transformation, rather than viewing it from the sidelines.

IaaS, being a key component of all things cloud, will prove to play an important role in 2015 for CIOs, corporations and IT service providers.

#### **Marc Malizia**

Co-Founder and Chief Technology Officer, RKON Technologies

Marc Malizia is co-founder and CTO of RKON Technologies, responsible for the company's overall technical vision and strategy. Since he helped start the company in 1998, Malizia has played a key role in creating many of RKON Technologies' products and professional service offerings, as well as building the company's internal computing platform, which serves as the basis of the brand's cloud and managed services portfolio.

Prior to RKON Technologies, Malizia was director of engineering at LAN Systems. He was also responsible for launching a professional services practice at WorkGroup Productivity.

Malizia holds a bachelor's degree in computer science and mathematics from University of Illinois and a master's degree in telecommunications from DePaul University.

