

# high availability in a hybrid world

WHITE PAPER | CLOUD

## Characteristics of the Next-Generation Data Center

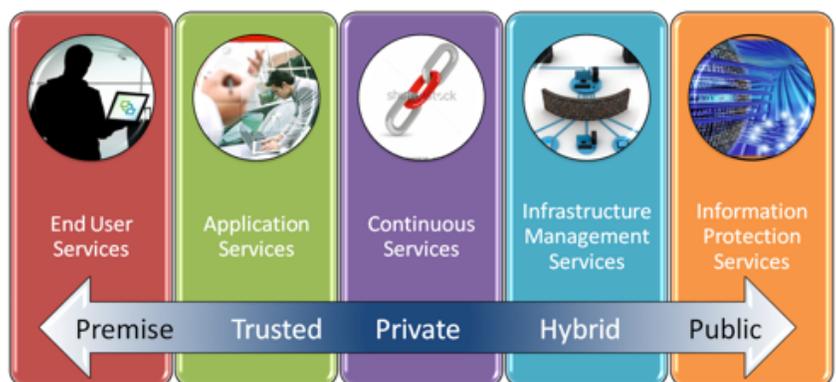
By Andrew Sherman, VP Advanced Consulting and Steve Kaplan, VP Virtualization and Cloud

**The following is one of a collection of articles that addresses strategy around hybrid cloud architecture and IT as a Service.**

While the industry buzz around datacenter technologies is already dizzying, it's still managing to become increasingly confusing. Every vendor seems to be laying claim to a new way of approaching the datacenter, cloud computing, and consumption models. As Presidio has transitioned from the solutions integrator of prior years to a cloud integrator, our emphasis is on helping clients filter through all the noise to understand where the new technologies can make a real business impact. As we sift through the morass, we get to see that what really matters are the services being offered to businesses and users. Our ultimate objective is to help our clients transition their data centers from inefficient islands of technology to unified, dynamic environments and resource pools – whether on premise or located in public clouds. The old data center model transforms into one which provides IT-as-a-Service.

### CLOUD INTEGRATION

Cloud - whether public, private or hybrid, offers organizations unmatched opportunities for IT responsiveness, agility and efficiency. The key is to know which workloads belong where, and how to integrate all options into a manageable environment. Performance, security, regulatory compliance, recoverability, cost, scalability, accountability and chargeback are just some of the many attributes that must be addressed.



The model we use for integrated cloud services is represented by the five areas in the picture above. They provide a basis for understanding and categorizing the solutions that we service and support. The Premise to Public arrows means that the five services can be delivered in any of those models.

# high availability

## in a hybrid world

### End User Services

While end-user services today are not typically thought of as having much to do with “cloud,” that is rapidly changing. For example, virtual desktops are, by themselves, very cloud-like in that they can be provisioned on demand, scale up or down as needed, be accessed from anywhere, etc. The key is to not get mired in individual brands and instead migrate to a desktop-as-a-service environment that becomes a subset of the overall IT-as-a-Service. This enables tremendous capabilities and efficiencies from the servers down to the desktops.

### Application Services

As the technologies in the datacenter have matured over the last decade, the questions have by and large shifted from “Are you going to virtualize?” to “What applications do you have left to virtualize?” But the tier-1, mission critical and regulated applications often require far deeper understanding and experience in order to ensure security, compliance and performance as virtual machines.

### Continuous Services

Private clouds have rapidly been increasing in popularity as the frameworks and tools enabling them mature. But IT faces myriad options as well in terms of capabilities, maturity, reliability and cost. Additionally, the various alternatives must be assessed not only from the standpoint of how they enable the private cloud directly, but in how they interoperate with other current and potential future solutions. Departmental budgeting processes require shifting to shared models that align with cloud attributes as well as which promote optimal resource utilization.

### Infrastructure Management Services

Industry analysts tend to agree that the most common cloud based model is likely to be a

hybrid one where some workloads are kept in public clouds (including SaaS and PaaS) and some in private clouds. But this model still requires the IT staff to have a portal from which they can monitor and manage both environments as well as move workloads between the public and private clouds as warranted, or to alternative public cloud providers.

### Information Protection Services

Studies show that the biggest hurdle for organizations moving to the public cloud is a lack of trust in security. This includes not only typical breaches, but issues caused by the providers themselves (including bankruptcy, government seizure, etc.) or by their employees. Once servers are placed in the public cloud, they are removed from the ability of IT to jump in and take control. Security and many other concerns must be satisfactorily resolved as part of an effective ITaaS environment.

## Questions Today

Most of our clients have virtualized their environments somewhere along the scale from partial to complete. The types of questions we hear are: “How can we better manage our infrastructure? What processes can be automated? How can we build elasticity into our storage environment? How can we provide communications applications to end users no matter what device they utilize?”

Presidio is committed to answering these and the many other next-generation data center questions in a comprehensive manner. We work closely with our clients both in the design and implementation of the solutions. We strive to facilitate an optimal yet self-sufficient transformation to IT-as-a-Service.

# high availability in a hybrid world



**CHARACTERISTICS OF THE NEXT-GENERATION DATA CENTER** is one in a series of articles that create the conversation of "High Availability in a Hybrid World." You can find all of the articles on our website at [presidio.com/high-availability.php](http://presidio.com/high-availability.php). These assets are meant as a resource for IT decision makers who are faced with the challenge of creating either a hybrid cloud or IT as a Service strategy.

#### **HYBRID CLOUD DEFINED**

Hybrid cloud is a composition of two or more clouds (private, community or public) that remain unique entities but are bound together, offering

the benefits of multiple deployment models. By utilizing hybrid cloud architecture, companies and individuals are able to obtain degrees of fault tolerance combined with locally immediate usability without dependency on internet connectivity. Hybrid cloud architecture requires both on-premises resources and off-site (remote) server-based cloud infrastructure. Hybrid cloud provides the flexibility of in-house applications with the fault tolerance and scalability of cloud based services.

#### **IT as a SERVICE DEFINED**

(ITaaS) is an operational model where the IT organization of an enterprise is run much like business, acting and operating as an internal service provider. In this model, IT simplifies and encourages service consumption, provides improved financial transparency for IT services, and partners more closely with lines of business. This type of IT transformation is business focused rather than cost focused, leading directly to improved levels of business agility. Typically, ITaaS is enabled by technology models such as Infrastructure as a Service (IaaS) and Platform as a Service (PaaS), all of which are part of cloud computing.

**For more information please contact us at [Presidio.com](http://Presidio.com)**