What you should know about newspaper cloud computing

Cloud Computing Contrasts

Cloud computing dominates today's discussion as the most innovative new way to provide software to every business, including news publishers. The fact is, there are no rules or standards for what defines a cloud computing solution. Many software solution providers – no matter if they have a true cloud computing solution or not - claim that they do. While it's easy to tout the "me too" argument, it is not so easy to provide a cloud computing solution that meets the performance, security and uptime requirements of newspapers. In this paper, we offer a few sharp contrasts to help you discern the differences among the claims and the actual solutions. Here are 5 critical ways that cloud computing solutions differ, and the questions you should ask:

1. **Is it true Software-as-a-Service (SaaS) OR simple hosting?**

   Not all cloud solutions are alike. True "Software as a Service (SaaS)" delivers software over the Internet, eliminating the need to install and run the application on your own computers and simplifies maintenance and support. SaaS also enables customers to use applications remotely through a Web browser from anywhere in the world. There are many simple hosting approaches that do not deliver the full benefits of true SaaS. DTI Cloud is a true SaaS environment that delivers on the full promise of cloud computing for publishers.

2. **Is it a single tenant OR multi-tenant architecture?**

   Not all cloud database and application architectures are alike. A single-tenant architecture means that you have your own database and application infrastructure, rather than multi-tenant where you share the database and client configurations with other customers. DTI Cloud is single-tenant so that your data and applications are separate, safe and secure.

3. **Are the data center facilities certified as Tier 4 with fault tolerant site infrastructure guaranteeing 99.995% availability OR one of the lesser Tiers - 1, 2, or 3?**

Not all cloud data centers are alike. There are strict standards (TIA-942: Data Center Standards) that define four tiers of data centers. The lowest level is a Tier 1 data center, which is simply a server room, following basic guidelines for the installation of computer systems. The most stringent level is a Tier 4 data center, which is designed to host mission critical computer systems, with fully redundant subsystems and compartmentalized security zones controlled by biometric access controls methods. DTI Cloud provides the highest levels of infrastructure security and availability.

4. **Does the cloud network use multi-homing to leverage the network bandwidth and uptime of multiple Internet backbones OR just one or two carriers?**

   Not all cloud network architectures are alike. The quality of the network between the data center and the newspaper facility is fundamental to creating optimal performance. Bandwidth, latency, and reliability are the key variables. Most cloud computing solution providers only offer limited redundancy. DTI Cloud uses multi-homing and intelligently routes data across an average of eight major Internet backbones using a patented technology that insulates your traffic from the risk of network outages, providing reliable, stable, consistent connectivity. These mission critical qualities are essential to news media companies.

5. **Does the cloud computing infrastructure take full advantage of virtualization to maximize efficiency from the server to the desktop OR is it the traditional "one server, one application" model?**

   Not all cloud infrastructures are alike. Virtualization dramatically improves the efficiency and availability of resources and applications—even servers—when and where they are needed. Many cloud offerings do not provide a virtual infrastructure and require more hardware, bandwidth and energy to deliver an acceptable user experience to the desktop. DTI Cloud employs a virtual infrastructure using VMWare™ and other virtualization technologies to ensure the highest availability and performance.

The Publishing Cloud – the View from 30,000 Feet

To reduce costs and create competitive advantages, more and more news media companies embrace cloud computing every day. You do not need to pay the considerable expense of buying and maintaining new servers, or hassle with implementing upgrades—your users are working with the latest version as soon as it is available. A publishing cloud solution must support a number of critical functions that are unique to the publishing enterprise, including:

- Data gathering from a variety of sources and in a variety of media formats
- Managing many data types in a unified and auditable workflow
- Working collaboratively with high-design graphic, layout and video-intensive applications, and proofing and printing pages across a Wide Area Network
- Targeting content into various other media channels
- Integration with third party applications

Cloud computing, by its very nature, requires meeting these challenges within the constraints of light bandwidth WAN infrastructures. Supporting myriads of systems with thousands of users on server and disk farms, all with near-perfect uptime, presents yet another set of technical demands and expenses. Mission-critical publishing cloud solutions must be built on an iron-clad infrastructure. The differences become clearer when you ask these questions:

- Does it support both application and Web hosting, and can users access the system through browser technology anywhere in the world?
- Is the facility SAS-70 Type II compliant?
- Does the facility offer Sarbanes-Oxley (SOX)-compliant security and auditing?
- Does it offer CDN (Content Distribution Network) options?
- Does it have a Managed Services as an option?
- Is the performance optimized for clients using RDP (Remote Desktop Protocol)?
- Are all interfaces and integration points supported?
- Does the solution offer accelerated training and implementation tracks, and regular webinar updates?

DTI Cloud: the View from the Ground

The extreme demands of the newspaper publishing cloud led us to our partnership with Internap Network Services. DTI has invested heavily in SaaS infrastructure, research, development and testing. Internap offers the highest data center standards and gives DTI the needed flexibility to configure our own systems and solve many of the challenges unique to the news publishing industry. Internap's Private Network Access Point (P-NAP) technology resolved key WAN network issues critical to providing a quality application experience and supporting the needs of a demanding workflow.

Highest Availability

- DTI Cloud is deployed in a certified Tier 4 (TIA-942) facility.
- Super NOC (Network Operations Center): The facility is a POP (point-of-presence) for eight major telecommunications carriers including AT&T, Verizon, Sprint, Cognet and Cox Communications
- Fault tolerance (guaranteed 99.995% uptime
- Multiple active power and cooling, 2(n+1) redundancy, 2 UPS each with N+1 capacity

Highly Secure Environment

- DTI Cloud is an audited SAS-70 Type II operation that ensures high security and Sarbanes-Oxley (SOX) compliance
- Multiple layers of hardened physical security, 24/7/365 onsite security presence
- Multiple layers of electronically controlled card access for control of ingress and egress

Robust Infrastructure

- A farm of Sun servers that incorporate Intel multicore and Intel Micro-architecture (Nehale)
- Redundant NetApps: Fiber storage connected to the servers through the 10 GB Ethernet- NFS is the primary file system format, though it also uses other file structures
- NetApps FlexClone: This technology creates true clones—without requiring additional storage space
- Cisco Core Switches: Completely redundant network, VPN, router and firewall components

Route-Optimized Technology

DTI Cloud takes full advantage of Internap's patented Managed Internet Route Optimizer™ (MIRO) technology to monitor the performance of each Internet backbone, route traffic across the best path to provide faster and more reliable content and data delivery than traditional routing methods. MIRO technology continually analyzes the traffic situation and makes decisions dynamically and automatically to account for network performance changes.

So now you know

No two clouds are alike. For convenience, for efficiency, for economy, and for always having access to the latest version of the most advanced software in the industry, there's nothing else like DTI Cloud.

About DTI: Digital Technology International (DTI) delivers audience-centric Web, print, and mobile solutions to publishers around the world. Whether via DTI Cloud (Software as a Service) or on-premises, DTI software helps publishers generate new revenue, reduce costs, manage resources, and make more informed business decisions. Its solutions are successfully implemented at more than 2,000 customer sites around the globe. DTI is headquartered near Salt Lake City, with offices in Australia, Brazil, Canada, Denmark, Finland, Germany, Norway, Panama, Sweden, the United Kingdom and USA. You can find us on the Web at: www.dtint.com

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