



No two clouds are alike

...but you already knew that.

DTI Cloud
The dramatically different publishing cloud.



What every publisher needs to know about cloud computing

Why Cloud Computing is Making Headlines

Cloud computing is in the news as the hottest trend in the world of software. It's easy to see why given the compelling business benefits of true cloud computing:

- Reduced Cost - Cloud technology is paid incrementally, saving capital for other strategic initiatives.
- More Mobility - Employees can access information wherever they are, rather than having to remain at their desks.
- Allows IT to Shift Focus - No longer having to worry about software or server updates and other computing issues, your IT organization will be free to concentrate on innovation.

Cloud computing and Software as a Service (SaaS) hold the immense promise of reducing capital expenditures and other infrastructure costs while improving efficiencies and top-line revenue. That is an irresistible sales proposition, especially when there are no rules or standards for what defines a true cloud computing solution. It's too easy for software companies to claim they offer true cloud computing, even when they don't. What's not so easy is to build a cloud computing solution that meets the requirements of newspapers for performance, security and uptime.

In this paper, we offer five key contrasts to help you discern the differences among the cloud claims and actual cloud solutions. These are five critical ways that cloud computing solutions differ, and the questions you should ask before moving into the cloud:

1. Is it true Software as a Service (SaaS) or managed hosting?

Not all cloud solutions are alike. True "Software as a Service" delivers software over the Internet. This eliminates the need to install and run the application



on your own servers, and simplifies maintenance and support. SaaS also enables customers to use applications remotely through a Web browser from anywhere in the world. Many simple hosting approaches do not deliver the full benefits of true SaaS. *DTI Cloud* is a true SaaS environment that delivers enterprise-class security, performance, and support. DTI delivers the full promise of cloud computing to publishers.



2. Is it single tenant or a multi-tenant architecture?

Not all cloud database and application architectures are alike. As a publisher, you should be sure that all of your data and applications are separate, safe and secure from others. That is called single tenant architecture. Ask the right question and you may discover that a lower-priced “cloud” is a multi-tenant environment where you share the database and software configurations with other companies, maybe even competitors. *DTI Cloud* is a single-tenant architecture so that your data and applications are separate, safe and secure.

3. How many data network carriers does it provide? Does the network use multi-homing to leverage multiple Internet backbones, or just two carriers?

Not all cloud network services are alike, either. The quality and redundancy 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 providers offer only limited redundancy with just two carriers. *DTI Cloud* uses multi-homing with an average of eight major Internet backbones, and intelligently routes data using a patented technology that insulates your traffic from the risk of network outages. A data network with eight carriers provides reliable, stable, consistent connectivity. These mission-critical qualities are essential to news media companies.

4. Is the data center facility certified as Tier 3 or 4 with fault tolerant site infrastructure, or is it just a Tier 1 server room?

Not all cloud data centers are alike. Cloud computing may not yet have a standard definition, but 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. It is simply a computer server room—similar to what you have in your own facility—with basic guidelines for supporting computer systems. The most stringent level, a Tier 4 data center, is designed to host mission-critical computer systems, with fully redundant subsystems and compartmentalized security zones controlled by biometric access-control methods. *DTI Cloud* provides the highest levels of data center infrastructure in North America and Europe.





5. Does the cloud computing architecture provide full virtualization from the server to the desktop, or is it a simple “one server, one application” model?

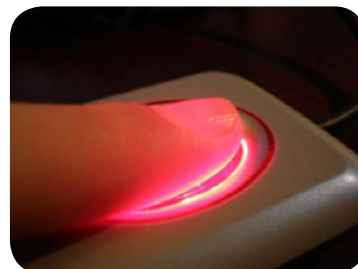
Not all cloud infrastructures are alike. Full virtualization dramatically improves the efficiency and availability of resources and applications—even servers—when and where they are needed. Many cloud offerings do not provide a virtual infrastructure and require more hardware, bandwidth and energy to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

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 that 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 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 more questions:



- 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 Content Distribution Network (CDN) options?
- Does it have “Managed Services” as an option?
- Is the performance optimized for clients using Remote Desktop Protocol (RDP)?
- 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

To meet the extreme mission-critical demands of the newspaper publishing, DTI has invested heavily in *DTI Cloud* infrastructure, research, development and testing. DTI offers the highest data center standards and provides the flexibility needed to



configure our own systems and solve many of the challenges unique to the news publishing industry.

Highest Availability

- *DTI Cloud* is deployed only in certified Tier 3 or 4 (TIA-942) facilities.
- Super Network Operations Center (Super NOC): The facility is a point-of-presence (POP) for an average of eight major telecommunications carriers.
- Fault tolerance with guaranteed 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 servers that incorporate Intel Microarchitecture
- 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 patented Managed Internet Route Optimizer™ (MIRO) technology to monitor the performance of each Internet Backbone and 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

These are just some of the reasons that no two clouds are alike. For performance, for security, for economies of scale, 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. The company's unique technology and professional services help media organizations engage audiences by delivering targeted news, ads and entertainment. Whether onsite or via *DTI Cloud*, DTI software helps customers 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 with more than 200 publishing in *DTI Cloud*. DTI is headquartered near Salt Lake City, with offices in Australia, Brazil, Canada, Denmark, Finland, France, Germany, Norway, Panama, Sweden, the United Kingdom and the United States. DTI may be found on the Web at: www.dtint.com

