5 Reasons Your Content Delivery Network is Failing You

Overview

Many applications operate over vast geographical distances, causing a dramatic impact on performance and speed. To address this issue, customers have traditionally deployed content delivery network (CDN) solutions. But now, with the growth of virtualized applications and cloud computing, you have an alternative solution called a content delivery cloud (CDC). A CDC helps improve performance while providing you greater flexibility and control over your content.

Remember when the only choice you had to distribute your content was with dedicated caching servers, complex infrastructures, and contracts that literally locked you in with a CDN provider? Times have changed. So if you continue to trust your valuable application data to a shared CDN infrastructure you’re short-changing your business.

With the right investment in a CDC platform, you get all the scale and performance benefits of a CDN while maintaining control over your digital assets without the need for complex and binding contracts. Furthermore, you can have a secure and customized content delivery platform in the cloud for your mobile and web applications. What’s more, you can do all this in a flexible form factor in the cloud at about a third of the cost of a traditional CDN.

Below are five ways your traditional content delivery network is failing you and how a CDC can be a better option.

1. **Your traditional CDN is not flexible**

   Your application and content demand is dynamic and can change for a variety of reasons and at any time. Many application owners can trigger demand just with the release of patches or software upgrades, while some users can trigger it when a game or news story goes viral. Some service delivery flexibility can be built into the agreements reached between content owners and the CDN providers today, but this is likely to be limited by the business models and commercial terms offered by each provider. As a result, your traditional CDN solution is not flexible enough to adapt in real-time to these dynamic demands, preventing you from rapidly deploying services in a matter of minutes and being able to adjust in real-time.

   A content delivery cloud, on the other hand, gives you a rapidly deployed, highly customizable infrastructure with global presence. By deploying a software ADC in the cloud, services can be rapidly activated in a matter of minutes and adjusted in real time, delivering a “where you need, as you need it” services model.

2. **Your traditional CDN can’t scale on demand.**

   Limited or non-existent programmatic access can limit a CDN’s ability to scale on demand and to manage the application layer that results in additional development costs. In some cases this lack of programmability can result in unsupported applications. In addition, given the scale of investment required for a CDN provider to be commercially successful, it’s no wonder that there are only a small number of companies that offer such services at a regional, national or global coverage level. To access CDN services, you, as the application owner, are required to contract with a third party company. These contracts are usually offered on a monthly basis and often require a term or data throughput commitment from the application owner. Service-level agreements (SLAs) will need to be defined and it may even be necessary to contract with more than one CDN provider to deliver the service levels and geographic reach the application requires.
With a content delivery cloud, on the other hand, you can have access to tools and interfaces that will allow you to programmatically adjust and scale your infrastructure and deliver services on demand. That means reduced costs due to a decrease in the amount of bandwidth required to deliver applications. It also means reduced host node capacity requirements since the heavy lifting is provided by edge CDC points-of-presence. When it comes to service definition, you are in complete control of when and how your content is stored at each location. You’ll also find that all the applications that are unsupported due to programmability limitations on a CDN can now be enabled on a content delivery cloud.

3. Your traditional CDN is not secure enough

By design, a CDN is a shared (multi-tenant) content delivery platform with content cached and delivered across a network of third party servers. As a content or application owner, you really need to be comfortable with this concept when utilizing a CDN. To deliver your content securely, a CDN provider would need to have copies of the relevant SSL certificates stored on their SSL caching servers throughout their infrastructure, or you would have to use shared SSL certificates. Divulging this SSL information exposes your confidential data to external vulnerabilities and threats.

Using a CDC takes this security vulnerability away and ensures that you know at all times both where your content will be stored, and that it will be delivered securely with SSL certificates stored on servers under your very own control. You retain visibility and control over the location and security of your content at all times. A CDC also provides compliance-based security policy protection at the edge through the use of an application-level threat identification and mitigation mechanisms such as application firewall capabilities.

4. Your traditional CDN is not easy to manage

In many cases, you may have customer site requirements that can expand beyond the control of a single CDN provider that would force you to deploy a complex and costly multi-vendor solution to achieve the geographic reach required for your business needs. As a result, SLAs will need to be defined with all these CDN providers to deliver the service levels your application requires. However, each CDN may have a different business model, SLA, and pricing, making supplier selection and management complicated and time-consuming.

With a CDC, you can have a private, custom-built infrastructure that is centrally administered by you and not a third party provider. This infrastructure will not only deliver the global reach and performance that you require for content delivery, but also a central point of control to easily incorporate business policy and SLAs. Since a CDC is centrally managed and operates over a common cloud infrastructure, the number of tools and touch points required to deploy, manage, and support the entire network is significantly reduced when compared to a CDN.

5. Your traditional CDN does not help you optimize your network resources

The availability of optimization features, such as web content optimization (WCO), is typically limited in CDNs. Consequently; you may need additional resources, such as connections or DNS lookups, which can result in increased costs stemming from high resource utilization and difficulty in meeting SLAs. Even if the services are available, they are typically too costly to justify. Another scenario is the vast geographic distances between the CDN POP and the location of the end users you may be serving. In these situations, the CDN does little to improve performance and end-user experience. However, you are typically paying high content costs to the CDN provider to serve these end users.

With advanced optimization features, a CDC can do much more for the application experience. By tapping into the application content itself and automating the optimization of it, you can give users a better experience based on their unique characteristics including browsing platform or location. WCO can take pages loaded with images, style sheets, scripts, etc., and optimize them based on the browsing platform of the user – mobile device, tablet, or laptop. Typically your application can run three to five times faster while saving you money by cutting bandwidth usage by up to 50%.
Why choose Riverbed Stingray for your content delivery cloud (CDC)

The Stingray™ content delivery cloud (CDC) from Riverbed Technology is a fast and efficient content delivery platform without the need for large initial capital investment or a complex infrastructure. Unlike a CDN, which leverages a global network of servers to deliver content for all CDN customers, the Stingray CDC utilizes public or private infrastructure to provide the points of presence that offer a private “CDN-like” experience for content delivery. A CDC uses an advanced software application delivery controller (ADC), such as Stingray™ Traffic Manager, as the intelligence within the infrastructure.

Don’t settle for a CDN

In the final analysis, while traditional CDNs are an established tool for content delivery, they do have some significant drawbacks as we’ve outlined in this paper. Content delivery cloud platforms have emerged as a viable and superior alternative to CDNs, giving you, the content owner, improved flexibility and control over your content delivery. They can offer significant improvements for your end-user experience in application environments where there is rapid business growth or change, while reducing your management overhead and CAPEX commitments and providing the scalability to meet business requirements.

About Riverbed

Riverbed delivers performance for the globally connected enterprise. With Riverbed, enterprises can successfully and intelligently implement strategic initiatives such as virtualization, consolidation, cloud computing, and disaster recovery without fear of compromising performance. By giving enterprises the platform they need to understand, optimize and consolidate their IT, Riverbed helps enterprises to build a fast, fluid and dynamic IT architecture that aligns with the business needs of the organization. Additional information about Riverbed (NASDAQ: RVBD) is available at www.riverbed.com.