



# How Cloud Services Benefit from Cloud-Based Delivery

*With a Look at Solutions from Akamai*

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Perspective Report

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## The Growing Role of the Internet in Service Delivery

Businesses of all types and sizes increasingly rely on cloud-based services for improved agility, economics and flexibility. They host both their new and existing applications in public infrastructure as a service (IaaS) environments. They use platform as a service (PaaS) to build new applications and services. They consume software as a service (SaaS) to provide leading functionality while avoiding installation and management overhead. Some businesses have even adopted a “cloud first” strategy for new IT initiatives.

Today’s workforce is more dispersed than ever and relies heavily on cloud-based services to stay productive. This means more employees are working from home or from coffee shops and need access to content and applications from their mobile devices. Likewise, customers and partners are making purchases and conducting business from unpredictable locations. All the network traffic from this distributed consumption is flowing outside the relative safety and control of the corporate network.

These trends – cloud-based services and distributed service consumption – are causing more traffic to flow across the public Internet, creating an entirely new set of challenges in the areas of performance, availability and security. Because IT organizations lack the control and visibility of a private network, users may experience more frequent service degradation and outages. And, without a solution, IT organizations face extensive troubleshooting and management challenges.

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## The Classic Solution: Application Delivery Controllers

IT organizations have always invested resources toward ensuring performance, availability and security for applications and services. One of the fundamental tools they use to meet these objectives in traditional IT environments is the application delivery controller (ADC). ADCs offer load-balancing and optimization features, such as compression and caching, as well as security features, such as basic intrusion detection and firewall capabilities.

ADCs can also add value in cloud computing environments but are not always the best solution. The fundamental problem with ADC solutions is that they must be deployed symmetrically in order to yield the full benefits. This means ADCs must be deployed on each side of the network, typically within the data center and near end-point devices. Of course, businesses can’t place

ADCs in every coffee shop or Internet access point. In fact, many businesses can't afford to put ADCs in all their primary locations, including branch offices. Even when ADCs make sense, they add an extra, unwanted layer of management tasks.

ADCs also tend to be overused in public IaaS environments. The easy availability of virtual ADCs is a contributing factor, with some cloud adopters deploying one or more virtual ADCs in each of their public clouds. Unfortunately, simply deploying an ADC in front of an application or service in the cloud only offers a partial solution. More ADCs or client software are needed near service end points to receive all the benefits.

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Neovise research has shown that the majority of cloud adopters will eventually purchase from and use multiple IaaS providers, causing even more ADC sprawl. Because ADC services vary among cloud providers, adopters can potentially end up with multiple incompatible solutions if they aren't careful.

This results in increased spending and management complexity, and makes it more difficult to migrate applications between providers.

ADCs have served for many years as the primary delivery solution in traditional IT environments. But as applications and services are increasingly deployed in public clouds and consumed from unpredictable locations, new delivery solutions are needed. To overcome vendor lock-in, and to support the needs of distributed end users, IT organizations could benefit from a unified platform that intelligently delivers cloud services on a global scale. They could also use visibility into the performance of services that traverse the Internet and insight into how users experience these services remotely.

## Solutions from Akamai

Built on the Akamai Intelligent Platform – a network of over 150,000 servers deployed in over 80 countries – Akamai cloud solutions accelerate service delivery and optimize end-user experiences everywhere. By monitoring their distributed network of servers and software, Akamai delivers intelligent service optimization that is continuously refined and improved for today's mobile and cloud demands. With points of presence (POP) within one hop of 90% of the world's Internet traffic, Akamai transforms the Internet into a powerful service delivery platform.

Let's examine two Akamai solutions, Terra Alta and Cloud Monitor:

## TERRA Alta

Terra Alta is a cloud-based application delivery solution that runs on the Akamai Intelligent Platform and supports both public cloud and private IT service delivery. Terra Alta requires no end-user client software or appliances, meaning IT organizations no longer need to deploy ADCs to improve performance, availability and security. It also means mobile users don't have to install a virtual appliance on their device to receive benefits.

By tapping into the Akamai Intelligent Platform, customers get end-to-end service optimization over the Internet. IT organizations can deliver instant acceleration to their end users regardless of their service provider or hosting location. End users also get optimization regardless of their location or client device.

*“By tapping into the Akamai Intelligent Platform, customers get end-to-end service optimization over the Internet.”*

This helps businesses serve a more diverse and dispersed set of end users with more valuable services.

Terra Alta offers a number of features for supporting cloud-delivered applications and services. This includes “cloud balancing” failover rules – custom layer-7 rules that let users instantly failover to another data center if their services go down. While typical DNS-based solutions can take up to 500 seconds to failover, Akamai end users experience virtually no downtime when this happens. Terra Alta also employs automatic threat detection to identify security risks over the Akamai network, and automatically stops them before they reach the customer's endpoint. Even when applications move from one environment to another, IT organizations can still maintain the same security and performance settings.

By using cloud-based service delivery, customers get the flexibility and confidence to pursue more cloud initiatives. Reduced capital investment in software and ADCs means IT organizations can focus their resources on new services and innovation. They also get the freedom to deploy and host their applications anywhere – or to move to an entirely different cloud provider – while still getting the benefits of the Akamai platform.

## Cloud Monitor

Akamai also offers Cloud Monitor, a monitoring solution that provides access to critical transaction and security event data. Cloud Monitor provides customers with a real-time data feed from the Akamai platform. By continuously monitoring the performance of services delivered over the Internet, Cloud Monitor provides deep visibility into traffic flows and transactions that were previously hidden. It also takes measurements from real end users to show how services are performing across multiple locations and devices. This helps IT organizations respond more quickly to incidents and make smarter decisions about service improvements.

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Cloud Monitor integrates with a variety of management and analytic solutions, so customers can transform their performance data into actionable insights. A standard API feed allows customers to leverage their existing tools, such as Splunk or BMC, and integrate data from multiple distributed sources for easier analysis and an improved holistic understanding of the environment.

Cloud Monitor greatly assists IT with the ongoing management of their cloud services, helping ensure a satisfactory end-user experience for customers that consume services over the Internet. IT organizations can also use Cloud Monitor to easily understand service metrics and ensure SLAs are met, both for their customers as well as their service providers.

## Neovise Perspective

As more businesses build and deploy applications in the cloud, more services are being delivered over the public Internet. This makes it difficult to maintain optimal service performance, availability and security. Classic solutions, such as ADCs, can be helpful but don't always provide the flexibility organizations need to support cloud delivery. Cloud adopters need new and improved ways to accelerate and monitor their services delivered over the Internet.

Using a powerful, distributed network of servers and software, Akamai has transformed the Internet into a global platform for accelerating cloud service delivery. With Terra Alta, customers get a highly consistent service optimization solution that yields benefits such as business agility, increased productivity, reduced management overhead, improved economics, and better quality of service for distributed end users.

*“IT organizations no longer need to rely on difficult-to-manage hardware and software solutions to achieve service optimization.”*

IT organizations no longer need to rely on difficult-to-manage hardware and software solutions to achieve service optimization. Instead, they can use Terra Alta to provide continuous service optimization and security for any end user, in any location, on any device. There is no lock-in or incompatibility that would make it difficult to move from one

provider to another, and organizations are free to experiment with new services while still getting delivery benefits.

With the addition of Cloud Monitor, IT organizations get deep visibility into application performance over the Internet, and insights into end user experience and quality of service. Cloud Monitor lets organizations integrate multiple data sources to create a consolidated view of performance data, so they can understand how applications are performing across multiple environments, including the Internet. Using Cloud Monitor, IT organizations can see where incidents are occurring, where performance is lacking, and where services can be improved.

Cloud Monitor gives customers the means to see and do more in their cloud environments, while Terra Alta provides a common toolset for accelerating cloud services from any location to any device. Together, customers get the intelligence and optimization they need to successfully deliver and consume services from the cloud.

### **About Neovise**

Based on independent research and analysis, Neovise delivers essential knowledge and guidance to cloud-related technology vendors, service providers and systems integrators, as well as business and IT organizations that purchase and use cloud-related services and technology. Our offerings include research, advisory and collateral development services that help our customers—and their customers—make optimal decisions and formulate winning strategies. ***Research. Analyze. Neovise.***

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