

**CDNetworks Dynamic Web Acceleration
The Total Cost of Ownership for Accelerating
Dynamic Sites and Applications**



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Objective for Understanding

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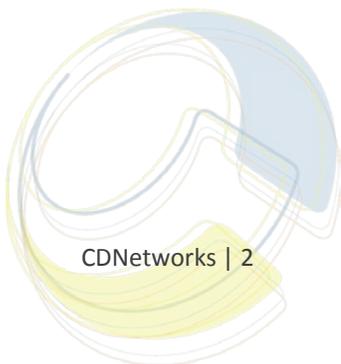
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Overview

A growing number of organizations are delivering mission-critical applications and dynamic content to end users – whether employees, partners, or customers – via the Internet. This shift is necessary to satisfy growing demands for anywhere, anytime access to processes and data, along with expectations for interactive site experiences. However, it's challenging for organizations to ensure that dynamic applications and content are delivered quickly and reliably – especially when users are located far from a company's origin server. Plus, dynamic content is non-cacheable due to its highly personalized and time-sensitive nature, which negates the effectiveness of traditional caching techniques in speeding up performance. Unfortunately, this critical issue simply cannot be ignored – when applications and content are slow or unavailable, application adoption and usage plummet and site abandonment soars.

As organizations weigh their options for addressing this issue, most find themselves comparing the choice of building out datacenters against outsourcing dynamic web and application delivery to a content delivery network (CDN) provider like CDNetworks.

This document presents information on the total cost of ownership of both options, along with critical ROI considerations, making it clear why CDNetworks Dynamic Web Acceleration solution is the smart choice.



Overview of CDNetworks Dynamic Web Acceleration

CDNetworks Dynamic Web Acceleration is a service that enables organizations to quickly and reliably deliver applications and dynamic content from their centralized infrastructure to users around the world. Because CDNetworks' global network delivers LAN-like performance for any web traffic running over HTTP/HTTPS, it eliminates the need for organizations to build out costly datacenters.

The Dynamic Web Acceleration solution uses advanced technologies to speed up and optimize the way application servers interact with the network. As a result, it overcomes the limitations of the legacy TCP/IP protocol, a narrow-band transmission protocol ill-suited to address the sophisticated delivery requirements of highly dynamic web application and content.

Using a state-of-the-art optimally tuned TCP stack across the Internet middle mile, Dynamic Web Acceleration transparently reduces response time and increases application availability. This standards-compliant solution is designed to address network latency and the request/response nature of web-based applications. By increasing TCP throughput and maintaining a pool of open connections, Dynamic Web Acceleration significantly reduces the number of round-trips between the end user and application server, thereby accelerating application response time to provide a LAN-like experience.

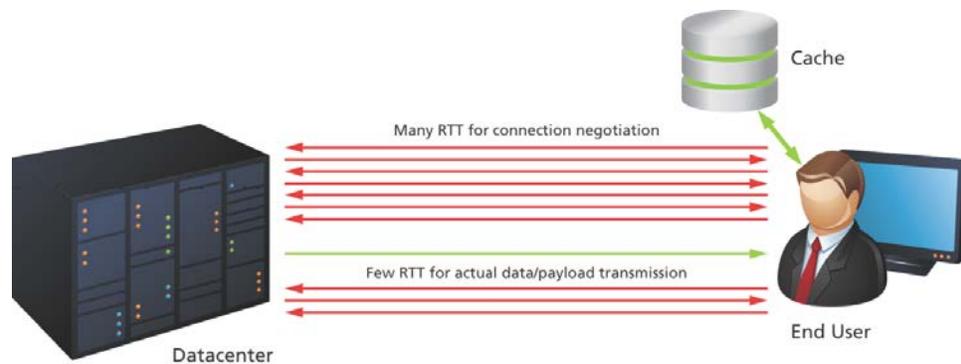


Figure 1. Without Dynamic Web Acceleration, the numerous round-trips required to serve non-cacheable content result in unacceptable delays

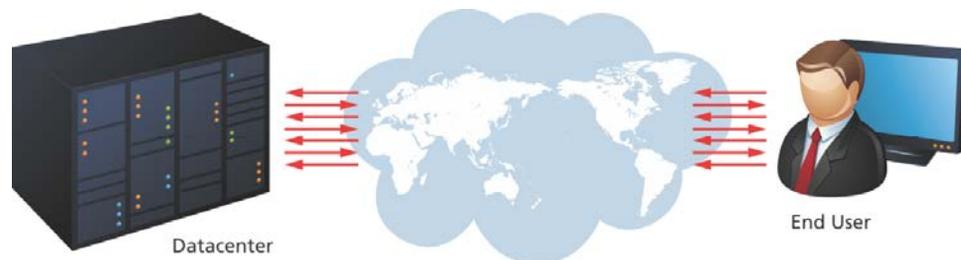
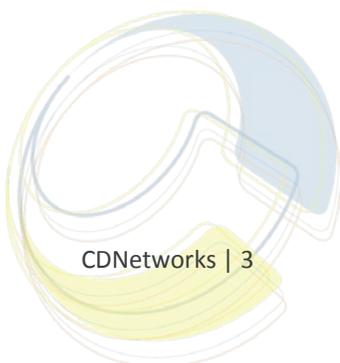


Figure 2. Dynamic Web Acceleration optimizes data transfers to ensure dynamic content is delivered quickly



Total Cost of Ownership of to Build Out Datacenters and Deliver Distributed Applications

Most businesses recognize the value of extending the reach of applications and business processes and delivering personalized, timely content. But few consider all that is required to enable this strategy. Managing multiple, globally distributed datacenters housing mission-critical application servers can be expensive and resource-intensive. Moreover, to adequately ensure optimal delivery of applications and content around the world, most organizations would need to build out an inordinate number of datacenters.

The Exorbitant Costs of In-House Dynamic Application and Content Delivery



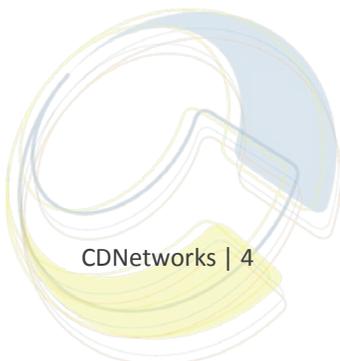
Figure 3. The fixed and monthly costs of building a datacenter far outweigh the benefits of utilizing CDNetworks' Dynamic Web Acceleration solution

FIXED COSTS OF BUILDING A DATACENTER

- Legal fees
- Real estate
- Site construction
- Hardware
- Web and applications servers
- Software licenses
- Capital costs incurred if expansion is required

ONGOING DATACENTER OPERATING COSTS

- Property taxes
- Heating and cooling
- Electricity
- Leased lines
- Migrations for software updates



PERSONNEL COSTS PER DATACENTER

- Several full-time IT staff to monitor and manage the network and applications
- 1-2 administrative staff

Productivity and Opportunity Cost/Lost Revenues

Those organizations that opt to depend upon their own datacenters to manage and deliver distributed applications must evaluate the consequences of downtime and slow application server response times. After all, even a distributed datacenter architecture is subject to the unpredictable nature of the Internet unless it's complemented by advanced technologies able to monitor and route around congestion and outages. The following are factors that organizations must consider as they assess the ramifications of poorly performing or unavailable applications or web pages.

PRODUCTIVITY COST ASSOCIATED WITH EMPLOYEES

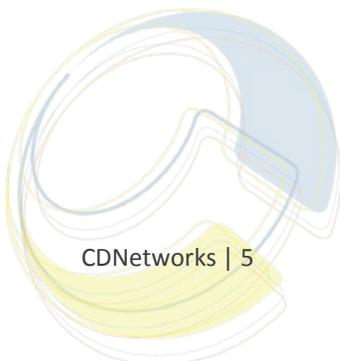
- Downtime in minutes, hours, or days
- Average number of employees accessing applications and/or pages
- Average employee salary
- Financial impact due to lost productivity

OPPORTUNITY COST ASSOCIATED WITH PARTNERS

- Downtime in minutes, hours, or days
- Average number of partners accessing applications and/or pages
- Revenues associated with application usage
- Financial impact due to lost opportunity and damaged reputation

REVENUE LOSS ASSOCIATED WITH CUSTOMERS

- Average monthly volume of site traffic/application use
- Percentage of downtime
- Average transaction value
- Percentage of abandoned transactions
- Revenue loss, both immediate and long term



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Time to Payback

Beyond basic ROI, most IT projects today must show a fast payback. By outsourcing dynamic web acceleration to CDNetworks, a typical business will realize positive net results within 90 days, versus a typical two-year time-to-payback when doing it all in house. This is because there is virtually no CapEx with CDNetworks.

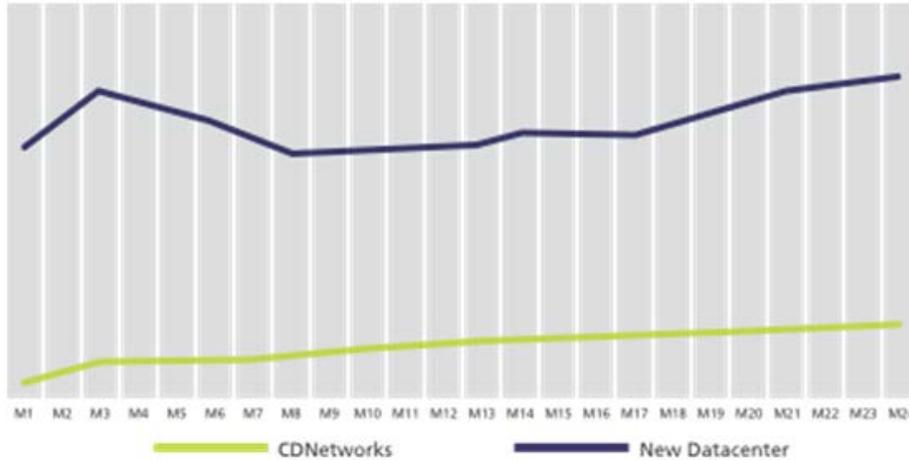


Figure 4. High capex costs associated with building a new datacenter vs. low cost of CDNetworks' Dynamic Web Acceleration solution

High-Value Business Benefits

Delivering applications and dynamic content via the Internet has become a must. But the Internet was not designed to guarantee the levels of responsiveness required to satisfy today's customers, employees, and partners. Unfortunately, it's cost-prohibitive and ineffective for a single organization to try to address this weakness by building out global datacenters. And too much is at risk to pursue this strategy.

Now organizations can cost-effectively web-enable critical business processes and satisfy expectations for a highly interactive site experience. CDNetworks has developed advanced capabilities that overcome the limitations of TCP/IP to ensure the fast and reliable delivery of dynamic content. We help our customers maximize revenue and productivity by enabling the following:

- Fast application response time
- Increased application and site usage
- Higher end-user satisfaction
- Higher adoption and conversion rates
- Brand loyalty

Ready to take advantage of a proven way to accelerate application response times? Contact CDNetworks at info@cdnetworks.com.

