

# Qwest® Content Delivery Network Service

## Networkx Service Overview

### **Deliver your Agency's Web content worldwide efficiently, rapidly, securely, reliably**

Qwest's Content Delivery Network Services (CDNS) reduces the Internet infrastructure required to extend your Agency's domestic or global Web presence, with on-demand scalability. Plus, Qwest's continuous monitoring controls Internet inconsistencies, ensuring timely and consistent content delivery, performance and quality of service.

### **Description**

Qwest's CDNS efficiently expands your Agency's ability to provide fast, secure and reliable Web content using the largest distributed platform in the world. Agencies will get a suite of capabilities that off-loads content from origin servers and delivers the content on their behalf. Using Qwest's unparalleled IP network capability and our subcontractor Akamai's industry-leading content delivery network, CDNS gives Agencies worldwide connections through Qwest's international Internet presence and Akamai's extensive global infrastructure.

### **Features**

Qwest's CDNS provide the following comprehensive list of features:

- **Static Content Download Service** - Provides fast, secure, and reliable download of content including HTML, text, video, music, etc. Content can be stored on CDNS servers deployed globally at the edge of the Internet for faster access.
- **Real-time Streaming (Webcasting)** - Delivers multimedia streams in real-time. Real-time streaming content includes (but is not limited to) RealNetworks Real Media, Microsoft Windows Media, Macromedia Flash and Apple QuickTime.
- **On-demand Streaming** - Hosts (i.e., provides storage for) and delivers streams on demand or when requested by Agency end users. On-demand streaming content includes (but is not limited to) RealNetworks Real Media, Microsoft Windows Media, Macromedia Flash and Apple QuickTime.
- **Encoding Services** - Available for Real-time and On-demand Streaming to convert Agency content into encoded files that can be streamed to a global audience.
- **Fallover** – Monitors single-location Web sites (maintained by Agencies or third-parties under contract to Agencies) and redirects traffic to a CDNS server in the event of failure. This service ensures that Agency end users do not experience delays, site inaccessibility, or error messages.
- **Global Load Balancing (Redirection and Distribution Services)** - Offers numerous servers with worldwide distribution to ensure that all Web requests are directed to the closest available Agency host server.

**Service Levels** – Qwest's CDNS provides continuous monitoring to ensure high performance and quality of service. Measurements include:

**Availability:** Qwest's CDNS leverages a highly reliable IP/MPLS network and massive Content Delivery Network (CDN) platform of 15,000 servers, 1,100 networks, and 2,500 physical locations. Load balancing and mapping software are applied at multiple levels, and this provides server redundancy throughout the infrastructure. At the enterprise level, Qwest continually monitors Internet status to determine the fastest, most reliable routing paths. Qwest's Acceptable Quality Level (AQL) is 100% for Availability.

**Latency for Static Content Download:** The combination of Qwest's dedicated IP connectivity and Akamai's high performance platform, with route optimization, flexible caching, and delivery from the optimal edge server, ensures that Qwest will meet and exceed the Networkx latency performance requirements. Qwest's AQL is < 1.5 seconds for Latency.

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**Time to refresh:** Qwest's CDNS meets and exceeds the requirement for time to refresh in its Networkx contract. While Qwest can establish time to refresh content in five minutes or less, Qwest's CDNS delivers much greater and more flexible refresh levels. Qwest's AQL is  $\leq 5$  minutes for time to refresh

**Time to restore (TTR):** Qwest's CDNS has been designed from the ground up to require minimal interface. It is a self-healing, autonomous network that facilitates Qwest's support of restoration requirements. Qwest's AQL for TTR without dispatch is  $\leq 4$  hours, and with dispatch is  $\leq 8$  hours.

#### Benefits

- **Performance:** Dynamic, real-time mapping of the Internet to place content and applications "at the edge".
- **Reliability:** Content is always available and its integrity is assured (i.e., not altered by third parties, including hackers).
- **Scalable:** Instant ability to scale on demand. Web services automatically scale-up when Agency end-user requests increase.
- **Available:** 100% availability SLA and real-time disaster recovery capability support continuity of operations plans.
- **Security:** Protects against denial of service (DoS) attacks, and shields your Agency's origin IP infrastructure.
- **Cost Savings:** Reduces hardware, software and maintenance costs, which minimizes and/or mitigates the need for future build-outs.
- **Time to Deploy:** Proven, rapid deployment option.

#### How it works

Qwest's Content Delivery Network Services incorporates equipment and algorithms to cache content on geographically dispersed servers on the Internet. When a request is made from a particular location for specific content, the server that can most rapidly and efficiently provide the content is dynamically identified. Qwest's CDNS consists of a collection of surrogate servers that attempt to offload work from origin1 servers by delivering content on their behalf. The servers belonging to Qwest's CDNS may be located at the same site as the origin server, or at different locations around the network, with some or all of the origin server's content cached or replicated among the Qwest CDNS servers. For each request, Qwest's CDNS attempts to locate a CDN server close to the Agency to serve the request, where "close" could include geographical, topological, or latency considerations.

**Geographic availability** – There are no geographic availability restrictions, domestically or globally.

#### Why buy from Qwest?

Qwest's approach to effective CDNS delivery incorporates our proven global Internet Protocol (IP) core network, Akamai's distributed CDNS, Qwest's proven deployment methodology, and our combined Government service staffs. The combination of a proven delivery platform and refined processes ensures Agencies of customized, effective solution deployment. Qwest's approach to CDNS leverages the Akamai content delivery infrastructure, thereby supporting world-wide distribution of content to meet Agency requirements.

Qwest's CDNS address four key technical/operational issues:

1. **Latency:** Akamai's extensive distribution of content servers ensures the least possible delay in delivering content to Agencies.
2. **Scalability:** The high capacity of Qwest's CDNS infrastructure will meet the requirements of all Agencies. Qwest's successful support of the high-capacity IRS Web site demonstrates the depth of our capabilities.

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3. **Reliability:** Qwest's network monitoring and content distribution algorithms ensure 100 percent content availability for Agency end users. And our security management capabilities ensure content integrity.
4. **Flash Crowd Control:** The capacity of Qwest's CDNS solution ensures our ability to meet unexpected high usage rates.

Qwest's proven CDNS approach offers Agencies access to an unparalleled CDNS capability.

### **Contract vehicle**

#### **Networkx Contracts**

- Qwest contract overviews are available online at the Qwest Networkx website.  
<http://www.gsanetworkx.com>

#### **Contact Information**

- Contact the Qwest Customer Support Office at 1 866-GSA-NETWorx (1 866-472-6389) or at: [federal@qwest.com](mailto:federal@qwest.com)
- A list of Qwest Account Managers is available on the "Locate your Account Team" page on the Qwest Networkx Website, <http://www.gsanetworkx.com>

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