

■ What is a Content Delivery Network (CDN)?

A CDN is a system of servers using advanced software for organizing, storing, and streaming website content for the express purpose of optimizing the flow of the content to end-users. It distributes the content to multiple, geographically diverse nodes and then serves the content from whichever node is closest to the end-user, minimizing packet travel and increasing speed and efficiency. There are two types of CDNs—virtual networks that connect end-users directly to the server and hybrid networks that combine CDNs with peer-to-peer networks.

■ What are the advantages of using SoftLayer's CDN over standard Internet content delivery?

SoftLayer's CDN delivers content more efficiently than standard Internet content delivery, letting businesses meet the growing demand for rich, online media that require large bandwidths.

Standard Internet delivery sends content data over general Internet routes from the host server's location to the end-user's location. This takes into account neither the host server's proximity to the end-user, nor possible traffic jams between the two. SoftLayer's CDN, however, moves the content from the host server to a node that is geographically closer to the end-user. This avoids potential network congestion and decreases latency, increasing delivery speed and providing consistent and reliable file transfer times.

In addition, as a solution created specifically for content delivery, SoftLayer's CDN includes tools that provide more content management and delivery control, helping with content monetization.

■ What types of content are generally delivered using a CDN?

Content Delivery Networks are most effective in delivering rich media content—focused in three main categories: streaming, progressive downloading, and caching. Streaming video benefits from the decreased latency. Video streamed over SoftLayer's CDN does not require the excessive buffering or suffer from the jitters experienced with traditional Internet content delivery; and end users can access any portion of the video stream without waiting through long load or download times. Media downloads also experience increases in speed and decreases in latency. SoftLayer's CDN load balances the download route to deliver virtually any type of Internet download to the end user, including: game downloads, new software, software upgrades, video, HD video, and audio. SoftLayer's CDN is also the optimal solution for delivering cached Internet content that may be static but is frequently accessed; used for companies that provide services such as online shopping, guided tour sites, social networking sites, financial sites, hotel and travel sites, and Web hosting companies.

■ Who should use SoftLayer's CDN? What kind of content is it best suited for?

Any company or individual that wants to make content available on the Internet should consider the CDN, particularly those wanting to deliver content that requires large transfer rates, such as video. This includes a wide variety of industries as caching, streaming, downloading services for social networks, entertainment, media, gaming, software, broadcast, e-commerce, and e-banking websites alike.

■ What file formats does the CDN support?

SoftLayer's CDN Supports Adobe® Flash® and Windows® Media for streaming files. SoftLayer's CDN also supports a wide array of encoding formats for downloading or caching media—including Windows Media Player, Flash Media, DivX®, H.264, Move Media Player, Microsoft Silverlight™, QuickTime™, MP3, RealSystem G2, RealPlayer®, Real Networks®, HTML, TXT, GIF, JPG, and PDF.

■ How much faster is the CDN compared with standard Internet content delivery?

The difference in delivery speeds between SoftLayer's CDN and standard Internet delivery varies based upon network conditions. The strength of the CDN lies in its ability to maintain reliable, consistent speed of delivery regardless of external network conditions. When standard Internet delivery is at its slowest, the content delivered over the CDN will remain virtually unaffected. SoftLayer's CDN also creates levels of redundancy for content distribution. If a single CDN node is out, the content is simply served from another location, thus reducing website outages and improving overall performance.

■ What is the difference in video performance between streaming media and progressive downloading?

With progressive downloading, video content is delivered chronologically and the end-user must wait for content to be delivered before it can be viewed. With video streaming, the end-user can skip forward through video content without the need for it to first be downloaded to the user's computer.

■ What technology is behind SoftLayer's CDN? How does it actually work?

Our CDN is powered on two levels. The underlying level is the network infrastructure—a global Internet backbone connecting various nodes on multiple continents. This allows content to be delivered from an optimal proximity to the end-user. The second level is the operating software which directs content between the nodes and maintains load balancing and content integrity.

■ What is the difference between Origin Pull and PoP Pull?

Origin Pull and PoP Pull are two different methodologies for the CDN to distribute your content. They differ in where the content is stored and what kind of experience the first requester for that content receives.

With Origin Pull, content is stored on any Internet connected server or computing instance. The content's location is then registered with the CDN. When the first user requests the content, it's pulled to the network and delivered from the closest point to that end-user. The content remains on the network for other users to access it until it's automatically cleared 24 hours after the last demand for it. The first requesting user has an average content delivery experience, while later users have streamlined delivery. Using Origin Pull requires a bandwidth plan, but no storage charges are incurred.

With PoP Pull, content is uploaded to the CDN, where it is ready for delivery at all times. When any user requests the content, it is delivered from the closest CDN node possible. All users have streamlined delivery for an exceptional user experience. Using POP Pull requires storage and bandwidth plans.

■ How does the CDN determine which node to use?

Our CDN monitors an end-user's location as well as network traffic and chooses which node will deliver the content with the least latency. It begins by analyzing the node with closest geographic proximity to the end user. If the node's performance will be compromised due to hardware, bandwidth traffic, or other issues, the CDN will direct content around the point of failure to maintain ultimate end user experience.

■ How many nodes does SoftLayer's CDN use?

Our CDN currently delivers content across 21 nodes across the globe: 15 nodes in the Americas, 4 in Asia, and 2 in Europe. This provides geographic diversity and the ability to deliver content from some of the largest Internet peering points in the world. SoftLayer and its partner, Internap®, will continue to add new nodes to our CDN to expand the reach and capabilities of the service.

■ How reliable is SoftLayer's CDN?

Our CDN is substantially more reliable for content delivery than standard unmonitored Internet delivery. By reducing stress on the host server and distributing content over a network of nodes, information can be stored securely and delivered consistently. Particularly for large file downloads or streaming media where latency can create interruptions, our CDN helps content arrive rapidly and without jitters, excess buffering, or service interruptions.

■ How will it work with my current hardware and infrastructure?

Adding SoftLayer's CDN as a service does not require any changes to your current operations. The CDN works with your existing hardware and infrastructure to boost current network conditions.

■ Why should I pay for the addition of a CDN when I have lower cost infrastructure in place?

SoftLayer's CDN helps deliver your content consistently and rapidly, leading to more profitable end-user interactions. The Internet was not originally designed to handle today's demanding media rich Internet content, leading to content delivery that suffers from latency, interruptions, and failed downloads. The more reliable and faster your content is delivered, the more time end-users are likely to spend on your particular website.

■ Why should my company outsource the use of a CDN and not build its own infrastructure?

Using our CDN reduces your internal overhead by relying on SoftLayer's servers designed specifically for the appropriate tasks. Rather than building infrastructure from the ground up, you are able to obtain the same benefits by only purchasing the quantity of service you need at any given time.

■ Does SoftLayer partner with another company to deliver the CDN? Who is the partner?

SoftLayer partners with Internap for our CDN because they are a consistent industry leader in Internet content distribution technologies. They offer Managed Internet Route Optimizer (MIRO) technology, an extensive CDN, and their Performance IP network offers fully redundant connectivity. These services combined provide one of the most extensive and reliable content delivery solutions available.

■ How do I begin using the CDN?

New or existing customers can easily add the CDN as a service. Our commitment is to make the entire purchase experience as simple as possible. Once the CDN is added as a service, it is billed based upon actual bandwidth used so you have the flexibility to scale up or down as needed without incurring any expense for unused service.

■ How can I monitor how people are using my online content?

SoftLayer's CDN offers extensive reporting and monitoring services. Statistics and performance monitoring are available through the SoftLayer Customer Portal or API.

■ How can I learn more about SoftLayer's CDN?

For more information on our CDN or any of our products, contact one of our technically trained sales staff by phone, email, or live chat via our site.

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