SEMI Switches CDN Providers to Achieve 100% Uptime in China and Reduce Cloud Acceleration Costs Globally

At a Glance

Company	|	SEMI
Founded	|	1970
Headquarters	|	San Jose, CA
Industry	|	High Tech
CDN Services	|	Web Performance Suite

Key Results

+ Eliminated site outages in China

+ Achieved 100% website uptime worldwide

+ Reduced CDN costs by 60% by improving service flexibility & visibility

Launched in 1970, SEMI is the global industry association serving the manufacturing supply chain for the micro- and nano-electronics industries. Today, these industries total nearly $50 billion in annual revenue. As the de facto information center for industry stakeholders, SEMI.org has grown significantly in popularity since the website was initially launched. In fact, the site has expanded to become twenty-six unique websites that support market development and advocacy initiatives in the major electronics manufacturing regions around the world. SEMI counts monthly website page views in the range of 4 million to 7 million, depending on industry developments and the timing of the organization's different initiatives.

As with most industries, the global electronics industry has faced significant challenges in recent years due to slowing economies around the world. With a strong pulse on the markets it serves, SEMI anticipated challenging market conditions and began to focus on ways to gain cost efficiencies in its operations while continuing to expand its member services.

The Challenge

SEMI has faced multiple challenges with its website infrastructure over the last three years. First and foremost, the organization reduced its IT staff by 75% in the face of a reduced IT budget. The IT staff was stretched to support multiple proprietary systems and manage their delivery via their twenty-six multilingual websites. SEMI's IT leaders had to find a way to simplify their IT infrastructure and deliver a quality user experience around the world.

SEMI's second challenge involved its China-based website. As China grew in global economic significance to the industries that SEMI serves, the organization needed to improve the reliability and performance of its China website or risk alienating a key target market. SEMI hired a local Web hosting service provider in China, but the China staff had little expertise in website performance, and the existing CDN provider had no presence in China. Moreover, the cost of hosting replicated versions of its websites in Hong Kong was prohibitively expensive — and it still would have left SEMI's content residing outside China's *"Great Firewall."*

"We could not have folded China into our Drupal environment without CDNetworks…Until now, China had to operate in a vacuum, which added unnecessary cost and complexity."

SHAWN GORDON
Director Global IT Operations and Technical Services, SEMI

A third challenge was the need for cost savings. SEMI planned to switch its Web content management (WCM) from a proprietary system to Drupal, the popular open source WCM application. Drupal would serve as the backend to SEMI's twenty-six websites and run over a public cloud infrastructure. SEMI's IT leaders knew that public clouds perform more slowly in key manufacturing supply chain regions of the world, such as China and India, than they do in the United States and Western Europe. For this reason, SEMI had already been leveraging CDN acceleration on top of the cloud. However, the CDN provider had no China presence, which meant that SEMI would need to pay for high-priced Asia-based hosting for its China website. The CDN provider was also metering services in an inflexible manner so that SEMI faced service charges that were higher and not aligned to actual usage.

The combined needs of strong cloud performance globally, better cost efficiency, and an enhanced China website operation concerned SEMI's budget-conscious IT leaders. *"We didn't know if there was a single CDN or Web hosting service provider who could help,"* says Gordon. *"Even if there were one, would they be able to deliver services at a reasonable price?"*

Key Objectives

As SEMI evaluated service providers, it focused on several core requirements:

▶ A strong China presence and knowledge of China's Internet regulations

▶ Global CDN coverage, particularly in key manufacturing supply chain regions

▶ Capabilities for accelerating both dynamic and static website and application content

▶ Flexible service options to keep costs in check as SEMI evolved its Web services

▶ Experience with accelerating cloud-based content and applications

Beyond these core requirements, SEMI hoped that the changeover from its existing CDN provider would happen quickly and painlessly.

The Solution: The Only Global CDN with a Local China Presence

Gordon's team did not need a long effort to narrow down its service provider options. While there were several CDN service providers with capabilities for delivering dynamic applications, only CDNetworks offered the combination of a local China presence, expertise with Chinese Internet regulations, and global presence in all the world regions that SEMI targeted for business development and advocacy. *"Not only did they have the capabilities and global reach we required, they could combine all their services and regions into one simple plan,"* explains a happy Gordon. *"That's the kind of operational simplicity and pricing visibility we needed."*

Since switching to CDNetworks, SEMI has achieved its initial goals and realized several unforeseen benefits.

Simplified Infrastructure

With CDNetworks' ability to deliver dynamic applications and content worldwide, SEMI has rationalized its Web hosting to one provider. The provider works hand-in-hand with CDNetworks to accelerate the twenty-six SEMI sites globally. Since the Web hosting provider has considerable Drupal deployment expertise, SEMI leverages an easy-to-understand, inexpensive, and outsourced three-tier architecture:
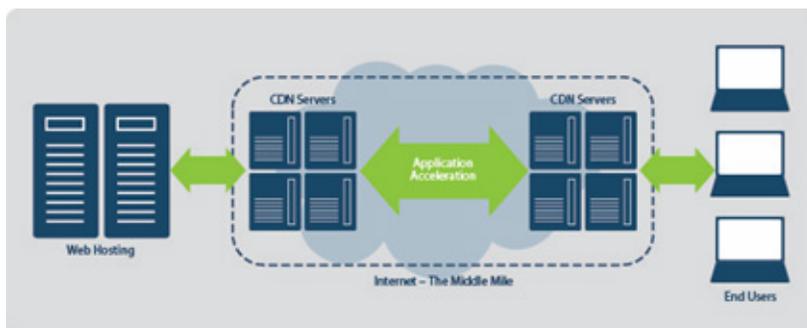
Additional savings and simplification have come from SEMI's ability to fold its China website onto the Drupal WCM environment. *"We never could have folded China into our Drupal environment without CDNetworks,"* says Gordon. *"Until now, China had to operate in a vacuum, which added unnecessary cost and complexity."*

Robust China Presence

Since switching to CDNetworks, SEMI has achieved 100% uptime for its China site. SEMI even took the additional step of transferring its China site back to The United States. Explains Gordon, *"Our China staff didn't want to deal with it, and CDNetworks virtually eliminates any performance glitches that would have plagued us before."* Gordon's team has found that bringing the site back to the US has helped further integrate website operations.

An unforeseen benefit comes from CDNetworks' knowledge of website content rules in China. *"CDNetworks really saves us from website missteps in China,"* says Gordon. *"They advise us to change certain site content that may be deemed objectionable by regulatory authorities. That's critical in-China knowledge that SEMI simply doesn't have without CDNetworks."*

Better Cost Efficiency

Despite serving more content to more of the world with CDNetworks, SEMI has actually reduced its CDN costs since making the changeover. *"It's not because CDNetworks leads with price,"* explains Gordon. *"It's because they have the flexibility and metering techniques in place to charge according to our business model and actual usage."*

CDNetworks was able to easily customize services to treat all twenty-six domains as one billable entity. *"Not only do we get the extra China delivery with CDNetworks, the entire package still comes in at a lower price point,"* says Gordon.

As noted earlier, SEMI's ability to incorporate the content, applications, and management of its China website with those for the rest of the world, the organization saves in several areas: Web hosting, application development, and website management.

SEMI's IT team can manage costs better using CDNetworks. With its prior CDN provider, certain thresholds must be met in order to obtain website traffic reporting details. However, CDNetworks provides SEMI with multiple views regarding traffic and traffic patterns. *"I like it because it helps me verify billing and get a better handle on what to expect in the future. That visibility helps me forecast budgetary needs,"* says Gordon.

Plans to Continue Doing More with Less

Leveraging CDNetworks, SEMI plans to provide website applications and content to more of the world in the coming months and years. *"We're very vibrant and have set ourselves up to do more despite having fewer staff,"* says Gordon. One example is SEMI's plan to introduce more live tradeshow support over its websites. The organization already runs an application for floor plan management and booth assignments. *"Whatever we do, we know that CDNetworks can handle the dynamic applications and make them fast anywhere in the world,"* says Gordon.

About SEMI

SEMI is the global industry association serving the nano- and microelectronics manufacturing supply chains. SEMI member companies are the engine of the future, enabling smarter, faster and more economical products that improve our lives. Since 1970, SEMI has been committed to helping members grow more profitably, create new markets and meet common industry challenges. SEMI maintains offices in Beijing, Bangalore, Berlin, Brussels, Grenoble, Hsinchu, Moscow, San Jose, Seoul, Shanghai, Singapore, Tokyo, and Washington, D.C. For more information, visit www.semi.org.

About CDNetworks

CDNetworks is a global content delivery network (CDN) with fully integrated Cloud Security DDoS protection and web application firewall. Our mission is to transform the Internet into a secure, reliable, scalable, and high-performing Application Delivery Network. CDNetworks accelerates more than 40,000 websites and cloud services over a network of 200 global PoPs in established and emerging markets including China and Russia. We have been serving enterprise customers for 15 years across industries such as gaming, finance, ecommerce, high tech, manufacturing, and media. CDNetworks offices are located in the U.S., UK, South Korea, China, Japan, and Singapore. For more information, please visit: http://www.cdnetworks.com

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