

Digital Media Leader Revolutionizes Network Performance to Meet Rapid Growth



Executive Summary

- **Customer Name:** DG
- **Industry:** Advertising, entertainment, and broadcast industries
- **Location:** 77 offices worldwide
- **Number of Employees:** 2000

Business Challenge

- Accelerate network speed to provide advanced digital services for customers
- Scale network capacity to handle network growth
- Reconcile disparate networks by standardizing on single vendor platform

Network Solution

- Upgrade switches, routing, and firewalls in data centers worldwide to Cisco Nexus Series Switches and Cisco Data Center solutions

Business Results

- Reduced switch deployment time from hours to minutes
- Increased network speeds up to 5 GB, eliminating slowdowns and poor network performance
- Improved IT staff productivity 46 percent

Technology Partner

- Netera Network Integrations, LLC

DG accelerates network speeds and increases productivity by standardizing on Cisco Unified Fabric in data centers.

Business Challenge

From streaming media to online distribution and supporting 3D video, the market for digital multimedia is growing fast, and DG is an industry leader. DG is the only company in the industry that offers an end-to-end digital advertising delivery network, from creative research to ad distribution and beyond. Through advanced satellite and Internet capabilities, DG eliminates the need to distribute content through videotape, enabling the company to reach the highest levels of reliability, speed, and efficiency.

In recent years, DG has experienced a surge of growth, both in the volume of business and type of content. In addition to production, advertising, and syndication services, DG has begun offering 3D content and movies streamed over the Internet. Recent acquisitions have also played a role in the company's exponential growth. DG acquired seven companies in the past two years and has increased its number of locations worldwide more than 500 percent, from 15 to 77 locations.

"Between acquisitions and offering next-generation content, our traffic increased 125 percent in just two years and we grew from two data centers to eight," says Mark Williams, manager of network engineering at DG. "Since digital distribution is the backbone of our business, we need the fastest and most reliable networks possible."

“Since deploying a Cisco Unified Fabric environment in our data centers, productivity for the networking staff has gone up 46 percent. Customers and staff are much happier with the network performance after our upgrade to Cisco Nexus Series Switches, and we’ve reduced the number of tickets in our help desk queue by 75 percent.”

– **Mark Williams**
Manager of Network Engineering
DG

With its sudden growth and ongoing acquisitions, DG’s data centers had changed from a unified environment built on Cisco switching and routing solutions into a hybrid environment with a mix of Cisco and other vendors. In the short term, DG needed to improve performance and make the existing solutions work together. Over the longer-term, DG needed solutions that could grow effectively and eventually support a more unified switching architecture across data centers and offices around the globe.

Network Solution

With multiple vendors in its data centers, DG carefully looked at several options to create a unified data center. After considering performance and costs, DG decided to build its network on a Cisco® Unified Fabric, leveraging best-in-class switching solutions. “We needed solutions that could expand with us and help our disparate network elements work together. Everyone up through the executive level supports Cisco because of its reputation for outstanding, high-performing products and high-quality support,” says Williams.

As a first step toward improving the speed and availability of the data centers, DG upgraded its Cisco Catalyst® 6500 Series Switches to Cisco Nexus® 5000 Series Switches. DG initially planned to upgrade to the newest Catalyst models, but Cisco offered the DG networking team a chance to test Nexus switches in a lab.

“The Cisco Nexus switches performed even better than we expected, with incredible availability and easy setup,” says Williams. “In my 15 years working in networking, I’ve never seen networking products perform as well as the Cisco Nexus Series Switches.”

DG has deployed two Cisco Nexus 5548 switches thus far. Each location uses two 1 GB WAN connections, and four major hub sites have 1 GB Internet connections. “Our first implementation of two Cisco Nexus switches was in our New York City location, which runs four times as much production compared to other locations,” says Williams. “The performance has been fantastic, completely eliminating bottlenecks and slowdowns for even the heaviest production traffic and has pushed us to replace legacy switches with two more at that location in 2013.”

In addition to enhanced performance, DG selected the Cisco Unified Fabric environment for its rapid, easy deployment, and management. With digital media distributed around the world 24 hours a day, DG cannot afford for the network to go down, resulting in maintenance windows that are few and far between. With streamlined deployment that does not require high levels of specialized knowledge, DG’s networking staff can quickly add or replace switches to boost network performance without causing outages that interrupt deliver of DG’s digital services.

“With Cisco Nexus switches, we can plug in parameters as we connect the switch, so it’s ready to go right out of the box,” says Williams. “Our existing switches could take hours to set up, but Cisco Nexus switches can be running in 10 minutes.”

In addition to the Cisco Nexus switches, DG also already upgraded its routers and firewalls at all of their major edge sites. DG switched to Cisco ASR 1002 routers, replacing the Cisco 7204 router along the edge, giving instant boosts to throughput. In addition to industry-leading performance and high availability, the Cisco ASR 1002 routers offer excellent security for use as high-performance edge routers.

By upgrading firewalls to Cisco ASA 5585 Adaptive Security Appliances, DG is embracing a full complement of services that help keep networks secure without jeopardizing network performance. With faster network performance and availability from Cisco switches, routers, and firewalls, DG is offering its customers worldwide the uninterrupted digital media distribution that they expect from the industry leader.

Business Results

With increased traffic capacity through firewalls, DG greatly increased network reliability and performance. With Cisco ASA 5585, DG has increased network speeds from 1 GB to 5 GB, eliminating traffic problems through the firewalls.

“CPU utilization, memory utilization, and packet losses all fell the moment we started using Cisco ASA 5585,” says Williams. “Our view into the network used to run on a delay of several minutes, but now we have instant network visibility.”

The enhanced performance and reliability of the Cisco Unified Fabric environment have transformed staff efficiency. Instead of watching interfaces and reacting to network problems, IT staff can become proactive and focus on issues that add value to the company, such as growing the network and optimizing the network design for better performance.

“Since deploying a Cisco Unified Fabric environment in our data centers, productivity for the networking staff has gone up 46 percent,” says Williams. “Customers and staff are much happier with the network performance after our upgrade to Cisco Nexus Series Switches, and we’ve reduced the number of tickets in our help desk queue by 75 percent.”

With the enhanced reliability and network speed of its Cisco-based data centers, DG is enabling revolutionary digital television experiences. For instance, during the 2012 London Olympics, DG worked with a customer to produce commercials that incorporated Olympics video footage captured from multiple locations in almost real time; the commercials aired only hours after the footage was shot.

“Taking a template commercial, we edited in the live Olympics footage, finalized the commercial, and distributed it digitally to stations within hours,” says Williams. “This sort of project would have never been possible with just the network environment in our previous data centers. Cisco Unified Fabric solutions give us the speed and power to deliver a whole new level of digital service for our customers.”

Next Steps

With continued plans for growth and expansion, DG has a clear roadmap for the future of its data centers. The long-term goal is to unify its disparate networking and communication systems by standardizing on Cisco Data Center and Unified Collaboration solutions. DG is also looking at Cisco UCS Manager to gain visibility into all of its Cisco devices while further simplifying device management and provisioning.

While acquisitions have diversified communications within DG, the company also plans to standardize on Cisco Unified Collaboration. Cisco IP phones are already in use at many locations, and DG is currently working on plans to implement Tandberg video conferencing systems to improve communications between its growing network of offices.



Product List

Routing and Switching

- Cisco Nexus 5548 Switches
- Cisco ASR 1002 Aggregation Services Router

Security and VPN

- Cisco ASA 5585 Adaptive Security Appliance

Voice and IP Communications

- Cisco Unified IP Phone 7942
- Cisco Unified Communications Manager

Applications

- VMware

Storage

- EMC Isilon

As the leader in digital content distribution, DG understands that technical excellence is key to providing new, advanced services to customers worldwide. By standardizing on Cisco solutions, DG will further accelerate network speeds, improve employee productivity, and transform the quality and experience of digital content delivered to audiences around the globe.

For More Information

To find out more about Cisco Unified Fabric solutions, go to: www.cisco.com/go/nexus.



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