

Case Study

# Gaming Data Center Solution

Optimizing Network Performance with  
FS's Advanced CDN Solution

FS's CDN solution enhance CDN network performance, reduce costs, and provide a reliable data center solution with high bandwidth, low latency, and zero packet loss.

## Optimizing Network Performance with FS's Advanced CDN Solution

### Country

 United States

### Industry

 Game, Entertainment

### Network Type

 Data Centers

### Solutions

 Internet Data Center

### Key Stats

- Customers deploy CDN data centers in multiple global locations near the network edge.
- The CDN network is built using 25G and 100G network speeds.
- By utilizing a traffic monitoring system with NetConf interfaces, bandwidth utilization rates have increased from 85% to 95%.
- With 768 server nodes, multiple servers concurrently process data, enabling faster, smarter, and more proactive responses to continuously changing network conditions.

### Highlights

- CDN provides nearby distribution and improves access experience
- Support PicOS® and AmpCon™ to improve the efficiency of unified management
- PicOS® Data Center Switches support network flow control technologies such as PFC/ECN to prevent data packet loss and ensure lossless transmission of network data
- With 768 server nodes, multiple servers concurrently process data, enabling faster, smarter, and more proactive responses to continuously changing network conditions.

### Overview

The client is a global cultural and entertainment industry group with products and operations in more than 100 countries and regions. It is a leading developer and operator of online games. FS is required to provide a CDN data center solution to provide a reliable network experience with high bandwidth, low latency, accurate forwarding, and zero packet loss to improve the game experience and services for gamers.

### Challenges

- Poor QoE and subpar infrastructure: Increasing demands for real-time entertainment and responsiveness strain current capabilities, leading to issues like packet loss during traffic bursts.
- Growing bandwidth requirements: Massive real-time services create new peaks in capacity demand, necessitating extremely low latency performance. CDN exports, involving multiple ISP connections, face fluctuations in both bandwidth and quality.
- High investment costs: Traditional CDN equipment upgrades incur significant expenses in terms of bandwidth and infrastructure construction costs.

### Solutions

In the FS CDN network solution, switches are mainly used to replace the border routers of the CDN egress network, which not only reduces equipment construction costs, but also meets the interconnection and interoperability requirements of the egress network. It can also perform QoS guarantees for different traffic flows or use optimization algorithms to reasonably schedule traffic to ensure bandwidth quality, reduce traffic operation costs, and improve bandwidth operation efficiency.

FS's CDN network solution positions content closer to the network edge using the N8560-32C switch with pre-installed picos system at the egress layer. Each QSFP28 port can be configured as 40/100GbE or 4x10/25GbE, supporting automated traffic status queries and traffic scheduling strategies. The RS6140 servers integrate BMC chips for easy management and built-in security, ensuring higher visibility, predictability, and traffic control to swiftly, intelligently, and proactively respond to evolving network conditions.

### Results

By adopting FS's CDN network solution, our clients have significantly enhanced their online experience globally. The deployment of N8560-32C switches to replace certain border routers has not only reduced costs but also boosted forwarding performance. Additionally, automated and high-precision outbound bandwidth management ensures bandwidth quality and effectively increases utilization rates from 85% to 95%. FS's solution has also alleviated access pressures on core data centers, reducing user bounce rates cost-effectively while ensuring high availability, thus guaranteeing seamless content delivery for service providers.

# Case Study

## Data Center Networking Solution



100G  
25G



Spine

100G QSFP28 SR4

Leaf

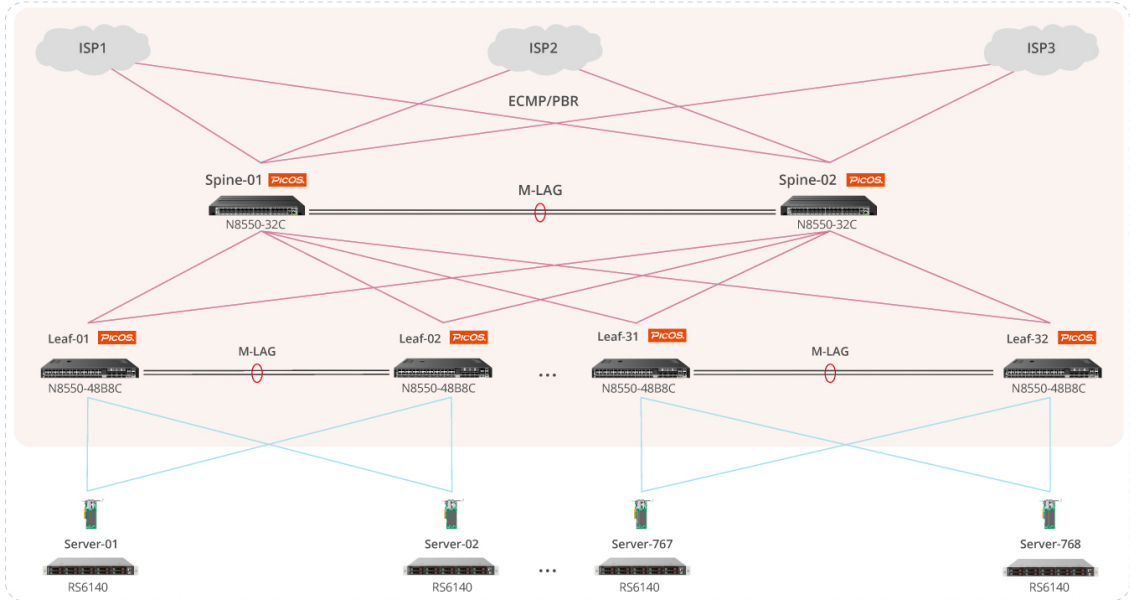
100G QSFP28 SR4

100G QSFP28 SR4

25G SFP28

Server

XXV710AM2-2BP





## **United States**

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