Customer Case Study

China Telco Recovers Bandwidth for Expanding Service Portfolio

Ningbo CNC Company chose a Cisco® Service Control Engine to free up core bandwidth for future services.

EXECUTIVE SUMMARY

NINGBO CNC

- Telecommunications
- Ningbo, China

BUSINESS CHALLENGE

- Adding new services: an increase in peer-to-peer (P2P) traffic was consuming the majority of available bandwidth.
- Controlling fees paid to other service providers based on volume of outgoing traffic.
- Simplifying management of the edge network.

NETWORK SOLUTIONS

- Cisco Service Control Engine (SCE) 2020 introduces the intelligence required to control traffic and services at the network edge.
- Quality of service features allow the provider to control bandwidth allocations.

BUSINESS RESULTS

- Recovered 40 percent of the bandwidth for outgoing traffic (previously consumed by P2P traffic).
- Gained the required capacity to deploy new subscriber services.
- Introduced the foundation for service- level differentiation.

BUSINESS CHALLENGE

With China's population recently breaking the 1.3-billion mark, the country's technology providers are racing to build out networks and deploy services. In Ningbo, the Ningbo CNC Company has already garnered more than 100,000 subscribers.

As their business grew, an analysis of traffic flow at the edge of the Ningbo CNC network showed a rapid increase in bandwidth utilization. As more subscribers were accessing the Internet, the peer-to-peer (P2P) capacity on the network was almost completely consumed. This network situation severely affected their plans to expand the subscriber service portfolio. The company's goals included the expansion of services to Internet bars/cafés (or "hot spots"), and also the ability to provide special enterprise services with high-quality, high-bandwidth service-level agreements. "Without overcoming our bandwidth issues, we knew that we could not move forward with our plans for future services," says Guo Shu Ni, manager of operations and management at Ningbo CNC. "We had to find a way to control the P2P traffic without negatively affecting our subscribers."

The increase in P2P traffic created another business challenge: increasing service provider costs. The reduction of fees paid to other providers was further incentive for finding a more bandwidth-conserving edge solution.

NETWORK SOLUTIONS

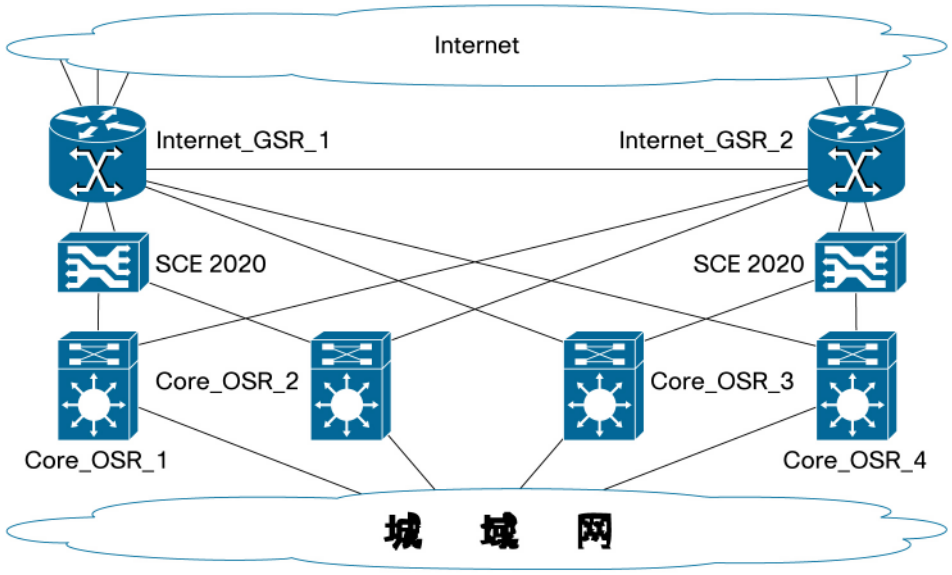
Due diligence quickly led Ningbo CNC to focus on the Cisco Service Control Engine (SCE) 2020 to overcome their business challenges. The proven performance of the local Cisco technical support team and previous success with the carrier-class stability, reliability, and performance of Cisco solutions ranked very high on the company's list of selection criteria. "Cisco has been a valued business partner for Ningbo CNC," says Guo Shu Ni. "The local staff has not only provided us with the technical solutions and support that our operations require on a day-to-day basis, but the account team has served as a respected advisor for our expanding business. They understand our market and our operations, and reliably propose solutions that are tailored to our situation."

For this particular deployment, the performance of the solution was the top technical requirement. The Ningbo CNC team also wanted a solution that would:

- Enhance service delivery with the ability to differentiate levels of service.
- Simplify network management.
- Introduce intelligence for managing converged traffic from future triple-play services.

A pilot Cisco SCE 2020 was installed in the production network, followed by an in-depth evaluation of the platform's performance and service deployment capabilities. The time required for high-speed 2–4GB P2P transfers was measured, with a goal of achieving the transfer in less than one minute. The Cisco SCE 2020 passed all of the tests during this pilot phase, and Ningbo CNC deployed the new edge platform as shown in Figure 1.

Figure 1. The Ningbo CNC Network Edge



The Cisco solution allowed Ningbo CNC to implement two different bandwidth control policies for downstream and upstream P2P traffic. The richness of the feature set not only met their immediate needs, but demonstrated the ability to manage future services that the company will deploy to its subscriber base. Cisco quality-of-service (QoS) functionality – Committed Access Rate limiting – was used to allocate bandwidth according to the policy requirements.

> **"The Cisco Service Control Engines have exceeded our expectations – the new network edge design not only overcomes the immediate obstacles that we faced in terms of bandwidth, but it gives us a solid foundation for future service deployments."**
>
> **– Guo Shu Ni, Manager of Operations and Management, Ningbo CNC**

BUSINESS RESULTS

With the Cisco SCE 2020 service control in place, Ningbo CNC has been able to recover 40 percent of the bandwidth previously required for outbound Internet traffic. This bandwidth savings directly results in a US$20,000 savings per month in charges previously paid to Internet service providers. In addition to the reduced cost, the provider now has the bandwidth needed to extend its network geographically and introduce top-priority enterprise service levels.

In addition to recovering bandwidth and thereby enabling new services, the new ability to differentiate service levels (using QoS) will greatly benefit the company's future service rollouts. Ningbo CNC will introduce subscriber-aware policy control features on their

network. Supported by Cisco SCE 2020 features, the policy controls will allow service differentiation, value-added services, and support of emerging bandwidth-sensitive “triple-play” services including IPTV.

“The Cisco Service Control Engines have exceeded our expectations – the new network edge design not only overcomes the immediate obstacles that we faced in terms of bandwidth, but it gives us a solid foundation for future service deployments,” says Guo Shu Ni.

PRODUCT LIST

Routing and Switching

- Cisco SCE 2020

Today, the network changes have been smoothly deployed without any disruptions for existing services and subscribers. The Cisco SCE 2020 makes it easier to control and manage edge traffic, and has given the network management team a solution that minimizes the support efforts required.

FOR MORE INFORMATION

To find out more about the Cisco Service Control Engines, go to: http://www.cisco.com/en/US/products/ps6151/index.html.

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