

The ClearSight Network Recorder gives data centers the power to provide a wide range of functions, including high-quality, upper-layer services

Combined with the enactment of J-SOX and other regulations, the trend toward ever-rising data volumes has driven corporate demand for data centers at exponential rates. The range of functions data centers are now expected to provide is nothing short of remarkable, and the convergence of these factors has created something like a second data center boom.

SoftBank IDC, a leader in the data-center industry, is in the midst of vigorously expanding its operations, with the goal of providing an even wider range of high-quality, upper-layer services, including services not seen in data centers to date. The ClearSight Network Recorder, a high-capacity packet capture/analysis system, is a powerful ally in implementing such services.

Providing an even wider range of high-quality, upper-layer services in high-speed broadband environments

Active in overall data center management, SoftBank IDC operates nine data centers throughout Japan. These data centers house corporate network system devices like servers and storage devices, to which corporate clients link via the company's backbone network. In addition to providing the corresponding operational and maintenance services, Software IDC's data centers implement advanced firewalls and load balancers to provide safer, more stable network environments.

In addition to demand for Web access, demand is surging for new high-quality services, including VoIP and video telephony and conferencing. Issei Inoue, the Backbone Network Group Manager in the Technology Division's Network Department, points to the importance of system management.

"Troubleshooting the problems that emerge in high-quality services is becoming ever more complex," he says. "That makes a tool capable of performing reliable analysis an absolute necessity."

Seeking a solution capable of rapidly identifying problems and providing reliable packet capture and analysis in environments ranging from one to several Gbps, the company selected the TOYO Corporation's ClearSight Network Recorder after carefully assessing the system from several perspectives.



ClearSight Network Recorder

Remote switching of monitor circuits through nimble control of the layer 2 switch

One reason for selecting the ClearSight Network Recorder installed at the SoftBank IDC headquarters is its remote operating capabilities.

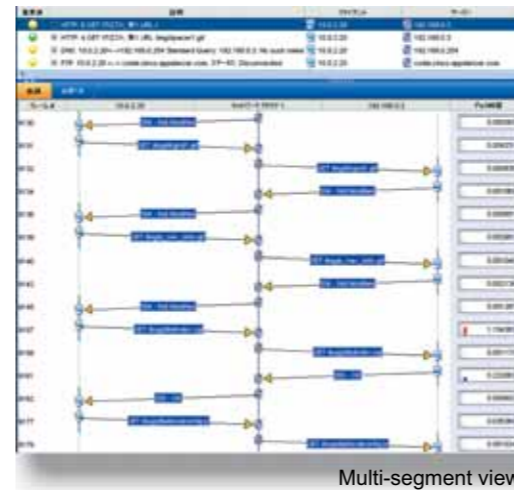
As with general data centers, the system is configured as follows: The user device is connected to a customer housing switch, which in turn is connected to the backbone network through a high-level router, and then to the Internet.

In the event of a problem, mirrored packets are captured by a ClearSight Network Recorder connected to the layer 2 switch, where the client switches and high-level routers are bundled, with client consent. For example, the layer 2 switch can be remotely controlled from the integrated monitoring room in Shinjuku in Tokyo for the various locations being monitored, permitting rapid packet capture and analysis for one circuit after another (see the network configuration figure). Key ClearSight Network Recorder capabilities are utilized here, including traffic monitoring over extended periods without data loss, even on

high-capacity circuits, and long-term continuous packet capture enabled by terabyte storage capacities.

Mr. Inoue recalls one particular experience. The client, a Web service provider, was experiencing considerable delays in server reads. Asked to analyze the problem, SoftBank was initially unable to determine where the packet losses were occurring.

"We looked at the IPS (Intrusion Prevention System) and connected two ClearSight Network Recorders, one at each end of the IPS, and captured packets at those locations," he said. "When we examined the packets, we found the expected losses. Changing the IPS settings solved the problem. That's a good example of the power of the ClearSight Network Recorder multi-segment function.



Multi-segment view

Benefits of implementing ClearSight Network Recorder and future prospects

Before SoftBank IDC chose to adopt the ClearSight Network Recorder, the company did its due diligence and considered solutions offered by other



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SoftBank IDC Corp. <Company Profile>

[Primary area of business]
SoftBank IDC provides high-quality solutions, including network security and operations monitoring, at nine data centers throughout Japan. In addition to basic data center services (including provision of Internet connection services via servers and other network devices housed at the data centers), SoftBank IDC offers a range of high-quality, upper-layer services, including managed network device services. Through proactive use of tools like ClearSight Network Recorder, the company is also venturing into troubleshooting and support, among other areas.

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vendors. Mr. Inoue recalled this process, from assessment through implementation.

"The ClearSight Network Recorder was the only solution that met our needs," he said. "The system had to be capable of monitoring at the Gbps level; continuous capture of high-speed broadband traffic; and analysis at the application level."

Typically, it takes considerable time to become familiar with a tool like this. However, as Mr. Inoue notes, ClearSight Network Recorder enables intuitive operation by permitting hierarchical troubleshooting, mainly with a mouse-driven interface. No manual was needed to get up and running. The product was also less expensive than those from other manufacturers.

"We gain peace of mind because the support base is located right here in Japan," says Mr. Inoue, discussing the product's advantages from his frontline perspective. "Another major factor is the support provided in Japanese." The prompt, detailed support provided by TOYO Corporation also won high marks.

One change Mr. Inoue would like to see is an enhanced filter function. While the ability to make filter settings with a simple click was attractive when the product was first implemented, says Mr. Inoue, "managers are familiar with the product now. Sometimes they want to enter conditions directly from the keyboard.

Having that kind of advanced functionality in addition to initial ease of use would be great."

Softbank IDC is also considering establishing environments that will enable rapid analysis when a problem occurs. This would be achieved by installing the ClearSight Network Recorder in other locations, as well as by capturing system management packets inside SoftBank IDC. Trends in network traffic point to an accelerating shift toward high-speed broadband applications. At a certain point, management relying on software alone will no longer be possible, and dedicated management devices will become essential. Still, general protocol analyzers are specialized devices beginners find difficult to use. In practice, few people are competent to operate such devices. In cases where the devices are used only when problems arise, personnel are likely to forget how to use the device after some time has passed, even if they were able to use it without problems when first implemented.

Mr. Inoue gives the ClearSight Network Recorder high marks in this area. "The ClearSight Network Recorder takes a mouse-based approach that lets personnel resolve problems through a hierarchical, drill-down approach. Use of Japanese and other factors also improve understanding of the system."

